PFAS - Currently Unavoidable Use Proposal

version 1.2

(Submission #: HQC-ZF13-Y8K4R, version 1)

Details

Submission ID HQC-ZF13-Y8K4R

Status In Process

Form Input

1. Submitter Information. (1 of 1)

Instructions

Provide the contact information for your organization.

a. Submitter

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b. Additional Submitter Details

If you have an additional or co-submitter, you may add them by clicking the Add New Submitter button. You can also add an additional submitter by clicking the Duplicate Submitter button, which will create a new submitter record by copying the first submitter. Duplicate Submitter details can be updated as needed.

2. Brief description of the type of product to which PFAS is intentionally added.

2a. Product Category

Product Category Name
Cookware product

The descriptive name of the product.
Fluoropolymer-coated non-stick cookware and bakeware

b. A brief narrative of the product; its physical structure; and appearance; how it functions; and if applicable, its place in larger items, systems, or processes.
Fluoropolymer-coated non-stick cookware are products such as pots, pans, or dishes in which food can be cooked. Most often, they are composed by:
• A metallic part covered by a coating made of fluoropolymers with non-stick property preventing food from sticking during cooking
• Handles.
They are intended to be used on different heat sources such as stoves and the like.

Fluoropolymer-coated non-stick bakeware are products that are containers intended to bake food in an oven. It includes items used to prepare baked goods like cakes, cookies, bread, muffins, pies; etc. They are composed of a metallic part covered by a non-stick coating made of fluoropolymer with non-stick property.

To find your GPC Category and code, visit https://gpc-browser.gs1.org/

c. GPC Category, if applicable.

GPC Category
73040400 Cookware/Bakeware

d. GPC Code, if applicable.

GPC Code
NONE PROVIDED

e. HTS Code, if applicable.

HTS Code
7615

f. NAICS code for sector or sectors in which the products containing intentionally added PFAS will be utilized.
332215-Metal Kitchen Cookware, Utensil, Cutlery, and Flatware (except Precious) Manufacturing

3. Explanation of why the availability of PFAS in this specific product is essential for health safety or the functioning of society.

Maine defines "Essential for health, safety or the functioning of society" to mean: "a use of a PFAS in a product when the function provided by the PFAS is necessary for the product to perform as intended, such that the unavailability of the PFAS for use in the product would cause the product to be unavailable, which would result in: (1) A significant increase in negative health outcomes; (2) An inability to mitigate significant risks to human health or the environment; or (3) A significant disruption of the daily functions on which society relies."

a. An explanation of why the availability of PFAS in this specific product is essential for health safety or the functioning of society.
Fluoropolymer-coated non-stick cookware has a range of properties which have made them a unique combination and the preferred choice for consumers, but as well essential for their health safety and functioning of society. See in the attached the complete explanation.

If needed, attach additional information.
Maine DEP MELS System - PFAS - CUU Proposal Cookware_FEC submission - chapter 3.docx - 05/30/2025 09:38 AM
Comment
NONE PROVIDED

4. Description of how the specific use of PFAS in the product is essential to the function of the product.

a. Please provide a description of how and why PFAS is essential to the function of the product. (This may include a description of the negative impact that would be caused by the unavailability of PFAS for use in the product and the subsequent unavailability or unsatisfactory performance of the product).

Fluoropolymers, unlike non-polymeric PFAS, play a critical role in non-stick cookware thanks to their unique combination of properties that make such products both safe and durable. Thank to its molecular structure that is highly stable, non-mobile, and non-bioaccumulative, PTFE cannot cross the gastrointestinal barrier or enter human cells and if it is ingested, it would be secreted as is. As a result, its use in food contact materials poses no identified risk to human health. This inherent safety is complemented by distinguished performance characteristics, including non-stick behavior, chemical and abrasion resistance, and resistance to heat and corrosion, which collectively ensure long-lasting (cookware and home appliance) product performance and contribute to healthier cooking practices over time. The unique functionality of fluoropolymers in cookware is not incidental, as it is essential to deliver reliable, high-quality, and health-conscious products. These materials enable a standard of convenience and longevity that cannot currently be matched by any other alternatives. Further, it is important to distinguish long-lasting, purpose-driven consumer products from consumable goods, where PFAS are often used in single-use items without the same functional justification.

For consumers, fluoropolymer-coated non-stick cookware offers superior non-stick performance, durability, and abrasion resistance resulting in longer product lifespan. No material offers the same combination of properties including ceramic see chapter 5.

b. Please provide a description of the specific characteristic or combination of characteristics that necessitate the use of PFAS in the product

Due to their chemical structure fluoropolymers demonstrate valuable properties including chemical, biological, and thermal stability, heat and chemical resistance, unique dielectric properties, and durability. Additional fluoropolymer properties include fire resistance, weather resistance, non-wetting, and non-stick (Korzeniowski et.al., 2022).

Fluoropolymers are regarded as irreplaceable in many applications because their unique combination of specific properties, which are critical to ensure optimal performance in many applications, cannot be achieved or guaranteed by alternative materials (Henry et al., 2018).

Fluoropolymers are one of the very few materials that meet system performance needs in high temperature and harsh chemical environments (Huber et al., 2019).

PTFE is generally superior to other fluoropolymers with respect to properties and performances, that has been extensively tested to comply with US and EU food contact and global medical device regulations (e.g., USFDA, CFDA, Korea MFDS, Japan PMDA), including ISO 10993 biocompatibility testing and preclinical animal testing.

Its chemical inertness and excellent thermal stability ensure that it does not react with food or degrade at typical cooking temperatures, preserving both food safety and material performance. Its smooth surface and low coefficient of friction enable outstanding non-stick functionality, reducing the need for oils and fats, and making cleanup easier. Additionally, the extremely low levels of residual monomers, oligomers, and low molecular weight leachables ensure that fluoropolymer-coated non-stick cookware meets stringent safety standards, minimizing the risk of contamination during food preparation. These properties, supported by studies such as Ebnesajjad (2011), Olabisi and Adewale (2015), and Henry et al. (2018), contribute to such fluoropolymer&#65533;s continued preference in the food sector, where cleanliness, safety, and reliability are critical.

c. If this use of PFAS in the product is required by federal or state law or regulation, please provide the following.

Type	Citation

5. Description of reasonably available alternatives for this specific use of PFAS.

Please provide a description of reasonably available alternatives for this specific use of PFAS. Include an evaluation of the following aspects in your description (attach supporting documentation if necessary).

a. Identification of specific compounds, classes of materials, or combinations of materials identified as potential alternatives including the removal of PFAS without substitution.

Traditional materials, such as cast iron, stainless steel, or untreated aluminum, lack inherent non-stick properties. While these materials may offer advantages in heat retention or durability, they typically require regular seasoning or the addition of oil to prevent food from sticking. As such, they do not meet the expectations of consumers seeking convenience and low-maintenance cooking. They are not alternatives to fluoropolymer-based non-stick surface.

Ceramic coatings are wrongly perceived as a workable substitute for fluoropolymer-based non-stick surfaces used in cookware. Numerous studies and consumer evaluations consistently show that ceramic coatings fall short of fluoropolymers, particularly in terms of non-stick durability and overall longevity (refer to point b of Q5). As a result, ceramic-coated non-stick surfaces in cookware typically require more frequent replacement, which can lead to greater environmental impact and higher long-term costs for consumers. Therefore, ceramic coatings are not a workable substitute for fluoropolymer-based non-stick surfaces in cookware. It also has to be noted that the potential impacts of ceramic coating should be evaluated with the same rigor applied to PFAS.

[redacted]

b. An assessment of how the materials listed above meet or fail to meet the criteria that necessitate the use of PFAS chemicals.

At present, ceramic-coated non-stick cookware have not achieved the same level of non-stick durability and performance as fluoropolymers:

1- According to a study by Rossi et al, the C**F** bond in fluoropolymers provides superior self-lubrication and non-stick properties, and chemical and thermal resistance compared to sol-gel ceramic coatings (Rossi et al., 2022).

2- This study demonstrated also that the main concern with sol**gel non-stick coatings is their reliability over long periods of usage and when subjected to wear. Unlike fluoropolymers coatings, ceramic coatings are not **intrinsically non-stick, relying only on the action of the functionalized groups of the topcoat, which can be easily removed by everyday usage.** This makes ceramic coatings more susceptible to abrasion, degradation, and loss of performance, contributing to their inferior quality in terms of non-stick durability.

3- **Sol**gel coatings, despite being proposed as valid alternatives to fluoropolymer ones, do not achieve the same quality standards in terms of releasing properties, being in addition much more sensible to degradation and loss in performances.** (Rossi et al., 2022)

4- Consumer evaluations of ceramic and fluoropolymer-coated cookware show that ceramic-coated non-stick cookware requires replacement more often due to lower durability, resulting in a potentially larger environmental impact and price inflation for consumers (Palermo, A., 2020).

c. An assessment of whether materials identified above are available in sufficient quantities to meet production needs.

[redacted]

d. An assessment of the anticipated cost difference between obtaining PFAS for use in the product subject to the proposal and obtaining the material identified above, for the same purpose.

[redacted]

e. A comparison of the known risks to human health and the environment between PFAS and the alternative materials identified above.

Siloxane monomers are essential precursors in the production of silicone polymers, which are widely used across industrial sectors, including in the manufacturing of so-called ceramic coatings for food contact purposes. While the production of these monomers and the formulation of silicone-based polymers occur on a global scale and increasing concerns have also led to their regulatory scrutiny.

Given both the performance limitations of ceramic-coated non-stick cookware alternatives as laid down in point b of Question 5, and the intensifying regulatory scrutiny of siloxanes monomers that are needed to produce the silicone oil embedded in ceramic coating, ceramic coatings does not appear as a workable substitute for fluoropolymer-based non-stick cookware.

f. An assessment of whether there are feasible changes to the manufacturing process of the product that would eliminate the need for PFAS.

This section focuses on the manufacturing of non-stick cookware.

The Fluoropolymers Product Group (FPG), a European-based association of global fluoropolymer manufacturers, reports that producers now employ advanced recovery technologies at the production stage to dramatically reduce residual primary non-polymeric PFAS. These technologies are complemented by strict safety and environmental management measures during the formulation of coatings, where emissions from fluoropolymer-containing dispersions are carefully prevented. This approach aligns with a fluoropolymers manufacturing commitment to achieve the Average Emission Factors of non-polymeric PFAS residues from polymerization aid technology used in the fluoropolymer manufacturing process of 0.003% to air and 0.0006% to water by 2030 (FPG Manufacturing Programme, 2023).

Further, non-polymeric PFAS are deliberately introduced during article manufacture. Any fluorinated polymerization aids remain only as trace residues (polymer suppliers declarations attest that state-of-the-art dispersions contain less than 1 ppm of fluorinated surfactants, a level below current analytical detection limits), and manufacturers address the few potential emission points for these aids or for fluoropolymer dust with stringent environmental-management measures such as fully enclosed process chambers, high-efficiency filtration systems, and dedicated capture-and-treatment units that together ensure releases to air, water, and waste streams stay well below regulatory thresholds.

See additional information in the enclosed file

Attach supporting documentation if necessary,

Maine DEP MELS System - PFAS - CUU Proposal Cookware_FEC submission - chapter 5.docx - 05/30/2025 09:39 AM

Comment

Question a-paragraph 3, c, d are confidential

6. List of federal regulations, other State of Maine rules, and regulations of other states which the product is subject to by reason of containing intentionally added PFAS.

a. Please provide a list of federal regulations, other State of Maine rules, and regulations of other states which the product is subject to by reason of containing intentionally added PFAS.
Minnesota is the only state in the country where a ban on the sale and distribution of non-stick cookware and bakeware has already taken effect.

There are also several states in the country that have excluded non-stick cookware from PFAS product bans. New Mexico recently signed into law HB 212 which excludes fluoropolymer coated products (such as non-stick cookware). California is currently debating SB 682, and Ohio is considering HB 272: both bills exclude fluoropolymer coated products. Illinois is finalizing HB 2516, which excludes non-stick cookware from PFAS product bans. Delaware and West Virginia have also exempted fluoropolymers from their PFAS regulation.

7. List of sales prohibitions that the product is subject to because of containing intentionally added PFAS.

a. Please provide a list of sales prohibitions that the product is subject to because of containing intentionally added PFAS. If there are no sales prohibitions, please type "none" into the Product Category Name.

Product Category	Product Category Name	Prohibition Citation	Prohibition Type	Have you filed a proposal?	Proposal Status

b. If a prohibition listed above is absolute, please provide a list of comparable products that the proposer is aware of remaining available for sale, offered for sale, or distributed for sale within that specific jurisdiction.
NONE PROVIDED

c. If the prohibition cited above is absolute, please provide justification explaining how products available in compliance with that prohibition are not reasonably available alternatives for the product subject to this CUU proposal in the State of Maine.
What are often considered to be alternatives to PTFE-coated, non-stick cookware and bakeware have properties that would introduce negative and unintended consequences to Maine consumers or businesses that use them:

[redacted]

d. If the prohibition cited above is absolute, please provide an explanation and supporting documentation of why those products containing PFAS alternatives listed above would not perform as intended in the State of Maine due to differing physical or climate conditions.
NONE PROVIDED

Attach additional information.
Confidential Attachment
Reason for Confidentiality
Contain critical technical information
Comment
Confidential

8. This section relates to information known or reasonably ascertainable by the submitter regarding the impacts on human health or the environment as a result of PFAS in the product.

a. Any information documenting impacts on human health as a result of the specific use of PFAS in the product.
PFAS used in cookware are fluoropolymers. They are recognized by authorities as Food Compliant materials:
- FDA: Code of Federal Regulations, Title 21, Section 177.1550 (CFR - Title 21, FDA).
- European Union: Commission Regulation (EU) No 10/2011 of 14 January 2011 on plastic materials and articles intended to come into contact with food.

The use of fluoropolymers in cookware is recognized by authorities and numerous organizations as posing no harm to human health:
- European Food Safety Agency (EFSA): FSA's Scientific Committee noted that the risk assessment of polymers used in food additives—those that can be ingested—must consider molecular weight (i.e., size). EFSA states that polymers are unlikely to be absorbed through the gastrointestinal barrier and are therefore not considered a health hazard (EFSA Journal, 2016).
- German Federal Institute for Risk Assessment (BfR BAuA): "The BfR has no data which would indicate that, under normal usage conditions (no overheating), any PTFE-coated cookware, ovenware or frying pans currently available on the market transfer fluorinated chemicals to food in quantities suitable for endangering human health. " Selected questions and answers on cookware, ovenware and frying pans with a non-stick coating made of PTFE (FAQ, 18 December 2018).

See additional information the enclosed file.

b. Provide a description of the likely pathways of human exposure for the specific use of PFAS in the product.
During cookware usage phase, consumers are exposed to negligeable amount of PFAS through the food being prepared:
- FDA: "The manufacturing process vaporizes off virtually all the smaller (i.e., migratory) PFAS molecules. The result is a highly polymerized coating bound to the non-stick surface of cookware. Studies show negligible amounts of PFAS in this coating can migrate to food ("Authorized Uses of PFAS in Food Contact Applications", FDA).
- EFSA confirmed that fluoropolymers in contact with food are not a major source of PFAS exposure. While some migration to food is possible, the quantity would be minimal—on the order of micrograms per kilogram ("g/kg)—a level significantly lower than the background levels of PFAS typically found in food, which remain the primary source of exposure (Risk to Human Health Related to the Presence of Perfluoroalkyl Substances in Food, 9 July 2020).
- Environmental Working Group (EWG), EWG emphasized that PTFE is not a significant source of exposure: "But even though it's always been the poster child for PFAS exposure, this cookware is not anticipated to be a major source of exposure." (Top 3 Ways to Reduce PFAS Exposure, EWG).

During normal use, part of the coating may peel off; however, this does not pose a health risk due to the inert nature of fluoropolymers:
- German Federal Institute for Risk Assessment (BfR BAuA) : "It is still safe to health if minute particles are released from scratched coatings and swallowed when eating. As PTFE is inert, these particles are not digested and are excreted from the body unchanged (FAQ, 18 December 2018).
Therefore, human exposure to PFAS used in cookware is negligeable and does not impact human health.

c. Provide any information documenting environmental impacts because of the specific use of PFAS in the product.
PFAS used in cookware are fluoropolymers. They are recognized as stable, chemically inert materials. Therefore, they pose a negligeable environmental impact:
- Interstate Technology & Regulatory Council (ITRC), September 2023: "Stable, insoluble fluoropolymer such as PTFE may pose little environmental, ecological, or health risk once it is in a product." (Full PFAS Guidance, December 2023).

Therefore, PFAS used in cookware are fluoropolymers, recognized as stable, chemically inert materials and therefore they pose negligeable environmental impact.

d. Provide a description of any likely pathways for environmental release of PFAS because of the specific use of PFAS in the product.
During manufacturing phase, fluoropolymers manufacturers are committed to apply best available techniques to limit emissions:
- Fluoropolymer Professional Association (FPG) including major US manufacturers have communicated in March 2025 about their achievements and continued efforts FPG. (Statement on the Manufacturing Programme 2025 - Plastics Europe).

During consumer use phase, the release of PFAS in the environment is negligeable:
- FDA: "The manufacturing process vaporizes off virtually all the smaller (i.e., migratory) PFAS molecules. The result is a highly polymerized coating bound to the non-stick surface of the small kitchen appliance. Studies show negligible amounts of PFAS in this coating can migrate to food ("Authorized Uses of PFAS in Food Contact Applications", FDA).
- PFAS used in cookware are fluoropolymers. They are recognized as stable, chemically inert materials. Therefore, they pose a negligeable environmental impact: see Interstate Technology & Regulatory Council (ITRC), September 2023: "stable, insoluble fluoropolymer such as PTFE may pose little environmental ecological or health risk once it is in a product (Full PFAS Guidance, December 2023).

See additional information in the enclosed file.

If needed, attach additional information.

Maine DEP MELS System - PFAS - CUU Proposal Cookware_FEC submission - chapter 8.docx - 05/30/2025 09:41 AM
Comment
NONE PROVIDED

9. This section relates to the product's fate at the end of its lifecycle.

a. Describe the product's fate at the end of its lifecycle, including any product stewardship programs or other government imposed processes.
In the United States, 47% of cookware are recycled; This lower number can be explained in particular by a higher level of donations than in the rest of the surveyed countries (15%).

However, according to a study of a cookware manufacturer carried out in 2024, two-thirds of consumers say they prefer channels that allow the recycling of kitchen utensils (waste disposal centre, domestic recycling, instore deposit).

This proportion is 47% in the USA (and rises to 73% in France or 80% in Sweden). In other cases, kitchen utensils are thrown away with household waste.

Additional Supportive Attachments

Maine DEP MELS System - PFAS - CUU Proposal Cookware_FEC submission - Chapter 9.docx - 05/30/2025 09:41 AM
Comment
NONE PROVIDED

b. How is the product intended to be disposed of, such as landfilling or via a sewage or septage system?
Landfill
Other: See enclosed file for additional information.

c. The recycling rate of the product.
80

10. This section relates to Confidential Business Information.

1. Please list the section (number) and question (letter) of submission information which contains confidential business information.

Section Number	Question Letter
5	a, 3rd paragraph
5	c
5	d
7	c, 2nd paragraph

Attachments

Date	Attachment Name	Context	Confidential?	User
5/30/2025 9:41 AM	Maine DEP MELS System - PFAS - CUU Proposal Cookware_FEC submission - Chapter 9.docx	Attachment	No	Olivier Brault
5/30/2025 9:41 AM	Maine DEP MELS System - PFAS - CUU Proposal Cookware_FEC submission - chapter 8.docx	Attachment	No	Olivier Brault
5/30/2025 9:40 AM	Maine DEP MELS System - PFAS - CUU Proposal Cookware_FEC submission - chapter 7.docx	Attachment	Yes	Olivier Brault
5/30/2025 9:39 AM	Maine DEP MELS System - PFAS - CUU Proposal Cookware_FEC submission - chapter 5.docx	Attachment	No	Olivier Brault
5/30/2025 9:38 AM	Maine DEP MELS System - PFAS - CUU Proposal Cookware_FEC submission - chapter 3.docx	Attachment	No	Olivier Brault

Status History

	User	Processing Status
5/30/2025 8:48:31 AM	Olivier Brault	Draft
5/30/2025 10:00:20 AM	Olivier Brault	Submitted
5/30/2025 10:00:22 AM	Olivier Brault	In Process

PFAS - Currently Unavoidable Use Proposal

version 1.2

(Submission #: HQC-ZR29-9YFEB, version 1)

Details

Submission ID HQC-ZR29-9YFEB
Status In Process

Form Input

1. Submitter Information. (1 of 1)

Instructions

Provide the contact information for your organization.

a. Submitter

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Last Name Burns
Title
President
Organization Name
Cookware Sustainability Alliance

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b. Additional Submitter Details

If you have an additional or co-submitter, you may add them by clicking the Add New Submitter button. You can also add an additional submitter by clicking the Duplicate Submitter button, which will create a new submitter record by copying the first submitter. Duplicate Submitter details can be updated as needed.

2. Brief description of the type of product to which PFAS is intentionally added.

2a. Product Category

Product Category Name
Cookware product

The descriptive name of the product.
Fluoropolymer-coated non-stick cookware and bakeware

b. A brief narrative of the product; its physical structure; and appearance; how it functions; and if applicable, its place in larger items, systems, or processes.
Fluoropolymer-coated non-stick cookware are products such as pots, pans, or dishes in which food can be cooked. Most often, they are composed of:
• A metallic part covered by a coating made of fluoropolymers with non-stick properties preventing food from sticking during the cooking process; and
• Handles.
They are intended to be used on different heat sources such as stoves.
Fluoropolymer-coated non-stick bakeware are products that are containers intended to bake food in an oven. They include items used to prepare baked goods like cakes, cookies, bread, muffins, pies; etc. They are composed of a metallic part covered by a non-stick coating made of fluoropolymer with non-stick properties.

To find your GPC Category and code, visit https://gpc-browser.gs1.org/

c. GPC Category, if applicable.

GPC Category
Class 73040400 Cookware/Bakeware

d. GPC Code, if applicable.

GPC Code
NONE PROVIDED

e. HTS Code, if applicable.

HTS Code
7323
7615
8205

f. NAICS code for sector or sectors in which the products containing intentionally added PFAS will be utilized.
332215-Metal Kitchen Cookware, Utensil, Cutlery, and Flatware (except Precious) Manufacturing

3. Explanation of why the availability of PFAS in this specific product is essential for health safety or the functioning of society.

Maine defines "Essential for health, safety or the functioning of society" to mean: "a use of a PFAS in a product when the function provided by the PFAS is necessary for the product to perform as intended, such that the unavailability of the PFAS for use in the product would cause the product to be unavailable, which would result in: (1) A significant increase in negative health outcomes; (2) An inability to mitigate significant risks to human health or the environment; or (3) A significant disruption of the daily functions on which society relies."

a. An explanation of why the availability of PFAS in this specific product is essential for health safety or the functioning of society.
Fluoropolymer-coated non-stick cookware has a range of properties that have resulted in a unique combination that make them the preferred choice for consumers. These properties are also essential for consumers health and safety when cooking or baking. The ability to cook and feed oneself is a strong component of a healthy functioning society.

The key properties are that Fluoropolymers:

- Create strong non-stick surfaces thanks to the exceptionally strong Carbon-Fluorinevbond, which has the highest bond energy among all organic compounds;
- Are chemical and abrasion resistant;
- Are heat resistant. Pyrolysis of food starts at 350 F, while PTFE is known to start to deteriorate at an extremely slow rate above 500 F. In other words, food left on a pan or in an oven for prolonged periods of time would burn and smoke far sooner than the pan itself might begin to.
- Are corrosion resistant and have verall durability; and
- Promote healthy and safe cooking because no oil is needed. Improper use of oils in cooking is a leading contributor to residential fires.

If needed, attach additional information.

Fluoropolymer properties.docx - 05/30/2025 05:52 PM

Comment

NONE PROVIDED

4. Description of how the specific use of PFAS in the product is essential to the function of the product.

a. Please provide a description of how and why PFAS is essential to the function of the product. (This may include a description of the negative impact that would be caused by the unavailability of PFAS for use in the product and the subsequent unavailability or unsatisfactory performance of the product).

Fluoropolymers, unlike non-polymeric PFAS which are the typical PFAS of concern like PFOA and PFOS, play a critical role in non-stick cookware thanks to their unique combination of properties that result in safe and durable products. PTFE's molecular structure is highly stable, non-mobile, and non-bioaccumulative, meaning it cannot cross the gastrointestinal barrier or enter human cells and if it is ingested; it would be secreted as is. As a result, PTFE's use in food contact materials poses no identified risk to human health. This inherent safety is complemented by distinguished performance characteristics, including non-stick behavior, chemical and abrasion resistance, and resistance to heat and corrosion, which collectively ensure long-lasting (cookware and home appliance) product performance and contribute to healthier cooking practices over time. The unique functionality of fluoropolymers in cookware is not incidental, as it is essential to deliver reliable, high-quality, and health-conscious products. These materials enable a standard of convenience and longevity that cannot currently be matched by any other alternatives. Further, it is important to distinguish long-lasting, purpose-driven consumer products from consumable goods, where PFAS are often used in single-use items without the same functional justification.

Ceramic coatings cannot and should not be perceived as a workable alternative to fluoropolymer-based non-stick cookware, nor should other materials such as cast iron, aluminum, or stainless steel, as such do not offer inherent similar non-stick properties. And while cast iron, aluminum, and stainless-steel cookware may share some of the advantages of fluoropolymer-coated non-stick cookware in terms of durability and heat distribution, they typically require substantial seasoning or the use of oil to prevent food from sticking, making them less convenient and possible increased costs for everyday non-stick cooking.

b. Please provide a description of the specific characteristic or combination of characteristics that necessitate the use of PFAS in the product

Due to their chemical structure fluoropolymers demonstrate valuable properties including chemical, biological, and thermal stability, heat and chemical resistance, unique dielectric properties, and durability. Additional fluoropolymer properties include fire resistance, weather resistance, non-wetting, and non-stick (Korzeniowski et.al., 2022).

Fluoropolymers are regarded as irreplaceable in many applications because their unique combination of specific properties, which are critical to ensure optimal performance in many applications, cannot be achieved or guaranteed by alternative materials (Henry et al., 2018).

Fluoropolymers are one of the very few materials that meet system performance needs in high temperature and harsh chemical environments (Huber et al., 2019).

PTFE is the most widely used fluoropolymer, belonging to the group of perfluorinated polymers and generally superior to other fluoropolymers with respect to properties and performances. This substance has been extensively tested to comply with US and EU food contact and global medical device regulations (e.g., USFDA, CFDA, Korea MFDS, Japan PMDA), including ISO 10993 biocompatibility testing and preclinical animal testing.

Federal regulations at the U.S. Food & Drug Administration (21 CFR 175.300) have authorized specific types of PFAS substances for use in food contact applications. The FDA has determined that PTFE cookware is safe to use due to the "highly polymerized coating bound to the surface of the cookware and studies showing negligible amounts of PFAS in this coating migrating to food, and that polymerized or large molecule PFAS are not absorbed by the human body when ingested." (updated 2024)

c. If this use of PFAS in the product is required by federal or state law or regulation, please provide the following.

Type	Citation
Not Applicable	*NONE PROVIDED*

5. Description of reasonably available alternatives for this specific use of PFAS.

Please provide a description of reasonably available alternatives for this specific use of PFAS. Include an evaluation of the

following aspects in your description (attach supporting documentation if necessary).

a. Identification of specific compounds, classes of materials, or combinations of materials identified as potential alternatives including the removal of PFAS without substitution.
Other forms of cookware and bakeware, such as cast iron, stainless steel, or untreated aluminum, lack inherent non-stick properties. While these materials may offer advantages in heat retention or durability, they typically require regular seasoning or the addition of oil to prevent food from sticking. As such, they do not meet the expectations of consumers seeking convenience and low-maintenance cooking. They are not viable alternatives to fluoropolymer-based non-stick surface.

[redacted]

b. An assessment of how the materials listed above meet or fail to meet the criteria that necessitate the use of PFAS chemicals.
At present, ceramic-coated non-stick cookware have not achieved the same level of non-stick durability and performance as fluoropolymers:

1- According to a study by Rossi et al, the C﷿F bond in fluoropolymers provides superior self-lubrication and non-stick properties, and chemical and thermal resistance compared to sol-gel ceramic coatings (Rossi et al., 2022).

2- This study demonstrated also that the main concern with sol﷿gel non-stick coatings is their reliability over long periods of usage and when subjected to wear. Unlike fluoropolymers coatings, ceramic coatings are not ﷿intrinsically non-stick, relying only on the action of the functionalized groups of the topcoat, which can be easily removed by everyday usage.﷿ This makes ceramic coatings more susceptible to abrasion, degradation, and loss of performance, contributing to their inferior quality in terms of non-stick durability.

3- ﷿Sol﷿gel coatings, despite being proposed as valid alternatives to fluoropolymer ones, do not achieve the same quality standards in terms of releasing properties, being in addition much more sensible to degradation and loss in performances.﷿ (Rossi et al., 2022)

4- Consumer evaluations of ceramic and fluoropolymer-coated cookware show that ceramic-coated non-stick cookware requires replacement more often due to lower durability, resulting in a potentially larger environmental impact and price inflation for consumers (Palermo, A., 2020).

c. An assessment of whether materials identified above are available in sufficient quantities to meet production needs.

[redacted]

d. An assessment of the anticipated cost difference between obtaining PFAS for use in the product subject to the proposal and obtaining the material identified above, for the same purpose.

[redacted]

e. A comparison of the known risks to human health and the environment between PFAS and the alternative materials identified above.

Siloxane monomers are essential precursors in the production of silicone polymers, which are widely used across industrial sectors, including in the manufacturing of so-called ceramic coatings for food contact purposes. While the production of these monomers and the formulation of silicone-based polymers occur on a global scale and increasing concerns have also led to their regulatory scrutiny.

Given both the performance limitations of ceramic-coated non-stick cookware alternatives as articulated in point b of Question 5, and the intensifying regulatory scrutiny of siloxanes monomers that are needed to produce the silicone oil embedded in ceramic coating, ceramic coatings do not appear as workable substitutes for fluoropolymer-based non-stick cookware.

f. An assessment of whether there are feasible changes to the manufacturing process of the product that would eliminate the need for PFAS.

The Fluoropolymers Product Group (FPG), a European-based association of global fluoropolymer manufacturers, reports that producers now employ advanced recovery technologies at the production stage to dramatically reduce residual primary non-polymeric PFAS. These technologies are complemented by strict safety and environmental management measures during the formulation of coatings, where emissions from fluoropolymer-containing dispersions are carefully prevented. This approach aligns with a fluoropolymers manufacturing commitment to achieve the Average Emission Factors of non-polymeric PFAS residues from polymerization aid technology used in the fluoropolymer manufacturing process of 0.003% to air and 0.0006% to water by 2030 (FPG Manufacturing Program, 2023).

No non-polymeric PFAS are deliberately introduced during article manufacture. Any fluorinated polymerization aids remain only as trace residues (polymer suppliers' declarations attest that state-of-the-art dispersions contain less than 1 ppm of fluorinated surfactants, a level below current analytical detection limits), and manufacturers address the few potential emission points for these aids or for fluoropolymer dust with stringent environmental-management measures such as fully enclosed process chambers, high-efficiency filtration systems, and dedicated capture-and-treatment units that together ensure releases to air, water, and waste streams stay well below regulatory thresholds.

Further, non-fluorinated polymerization aid (NFPA) technologies, which enable the production of fluoropolymers without relying on fluorinated polymerization aids, offer significant potential to substantially reduce the presence of non-polymeric PFAS in the manufacturing process. NFPA technologies are being used today and beginning to proliferate across the chemical manufacturing sector.

Attach supporting documentation if necessary,

Reasonably Available Alternatives.docx - 05/30/2025 06:48 PM

Comment

NONE PROVIDED

6. List of federal regulations, other State of Maine rules, and regulations of other states which the product is subject to by reason of containing intentionally added PFAS.

a. Please provide a list of federal regulations, other State of Maine rules, and regulations of other states which the product is subject to by reason of containing intentionally added PFAS.
Minnesota is the only state in the country where a ban on the sale and distribution of non-stick cookware and bakeware has already taken effect.

There are also several states in the country that have excluded non-stick cookware in PFAS product ban laws, though none has taken effect yet:

- New Mexico recently signed into law HB 212 which excludes fluoropolymer coated products (such as non-stick cookware).
- California is currently debating SB 682, and Ohio is moving HB 272: both of these PFAS product ban bills currently exclude fluoropolymer-coated products.
- Illinois is finalizing HB 2516, which excludes non-stick cookware from PFAS product bans.
- Delaware and West Virginia have exempted fluoropolymers from their PFAS regulatory definitions.

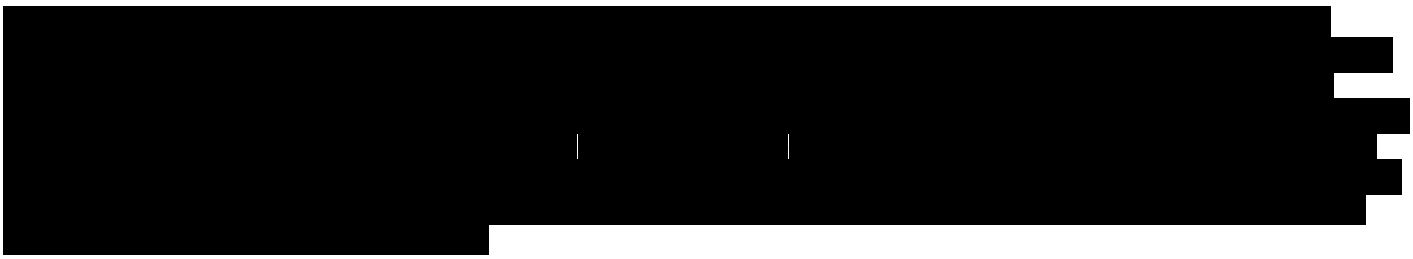
7. List of sales prohibitions that the product is subject to because of containing intentionally added PFAS.

a. Please provide a list of sales prohibitions that the product is subject to because of containing intentionally added PFAS. If there are no sales prohibitions, please type "none" into the Product Category Name.

Product Category	Product Category Name	Prohibition Citation	Prohibition Type	Have you filed a proposal?	Proposal Status
Cookware product	none	*NONE PROVIDED*	*NONE PROVIDED*		

b. If a prohibition listed above is absolute, please provide a list of comparable products that the proposer is aware of remaining available for sale, offered for sale, or distributed for sale within that specific jurisdiction.
NONE PROVIDED

c. If the prohibition cited above is absolute, please provide justification explaining how products available in compliance with that prohibition are not reasonably available alternatives for the product subject to this CUU proposal in the State of Maine.
What are often considered to be alternatives to PTFE-coated, non-stick cookware and bakeware have properties that would introduce negative and unintended consequences to Maine consumers or businesses that use them:



Just as important, however, is the fact that the long-term effects of the oils used in ceramic coating have not been studied nearly as long as PTFE has. It would be paradoxical to require Maine consumers switch to an alternative whose effects are not well known whilst sacrificing PTFE coatings that are known to be safe. Banning and replacing one product with another that has not been subjected to the same heightened scrutiny risks a rushed public policy that can lead to unintended outcomes, this would lead to a regrettable substitution. Crafting public policy that bans and replaces one product with another that has not been thoroughly tested is risky, to say the least.

d. If the prohibition cited above is absolute, please provide an explanation and supporting documentation of why those products containing PFAS alternatives listed above would not perform as intended in the State of Maine due to differing physical or climate conditions.
NONE PROVIDED

Attach additional information.
NONE PROVIDED
Comment
NONE PROVIDED

8. This section relates to information known or reasonably ascertainable by the submitter regarding the impacts on human health or the environment as a result of PFAS in the product.

a. Any information documenting impacts on human health as a result of the specific use of PFAS in the product.
PFAS used in cookware are limited to fluoropolymers. Fluoropolymers are recognized by various regulatory authorities, including but not limited to the US-FDA, as Food Compliant materials:

- US-FDA: Code of Federal Regulations, Title 21, Section 177.1550 (CFR - Title 21, FDA).
- European Union: Commission Regulation (EU) No 10/2011 of 14 January 2011 on plastic materials and articles intended to come into contact with food.

The use of fluoropolymers in cookware is recognized by authorities and numerous organizations as posing no harm to human health:

- European Food Safety Agency (EFSA): FSA's Scientific Committee noted that the risk assessment of polymers used in food additives—those that can be ingested—must consider molecular weight (i.e., size). EFSA states that polymers are unlikely to be absorbed through the gastrointestinal barrier and are therefore not considered a health hazard (EFSA Journal, 2016).
- German Federal Institute for Risk Assessment (BfR BAuA): "The BfR has no data which would indicate that, under normal usage conditions (no overheating), any PTFE-coated cookware, ovenware or frying pans currently available on the market transfer fluorinated chemicals to food in quantities suitable for endangering human health. " Selected questions and answers on cookware, ovenware and frying pans with a non-stick coating made of PTFE (FAQ, 18 December 2018).

b. Provide a description of the likely pathways of human exposure for the specific use of PFAS in the product.
During cookware usage phase, consumers are exposed to, at most, a negligeable amount of PFAS through the food being prepared with fluoropolymer-coated non-stick cookware:

- US-FDA: "The manufacturing process vaporizes off virtually all the smaller (i.e., migratory) PFAS molecules. The result is a highly polymerized coating bound to the non-stick surface of cookware. Studies show negligible amounts of PFAS in this coating can migrate to food ("Authorized Uses of PFAS in Food Contact Applications", US-FDA).
- EFSA confirmed that fluoropolymers in contact with food are not a major source of PFAS exposure. While some migration to food is possible, the quantity would be minimal—on the order of micrograms per kilogram (µg/kg)—a level significantly lower than the background levels of PFAS typically found in food, which remain the primary source of exposure (Risk to Human Health Related to the Presence of Perfluoroalkyl Substances in Food, 9 July 2020).

c. Provide any information documenting environmental impacts because of the specific use of PFAS in the product.
PFAS used in cookware are fluoropolymers. They are recognized as stable, chemically inert materials. Therefore they pose a negligeable environmental impact:

- Interstate Technology & Regulatory Council (ITRC), September 2023: "Stable, insoluble fluoropolymer such as PTFE may pose little environmental, ecological, or health risk once it is in a product." (Full PFAS Guidance, December 2023).

Therefore, PFAS used in cookware are fluoropolymers, recognized as stable, chemically inert materials and therefore they pose negligeable environmental impact.

d. Provide a description of any likely pathways for environmental release of PFAS because of the specific use of PFAS in the product.
During the manufacturing phase, fluoropolymers manufacturers are committed to apply best available techniques to limit emissions:

- Fluoropolymer Professional Association (FPG) including major US manufacturers have communicated in March 2025 about their achievements and continued efforts FPG. (Statement on the Manufacturing Program 2025 - Plastics Europe).

During the consumer use phase, the release of fluoropolymers to the environment is negligeable:

- US-FDA: "The manufacturing process vaporizes off virtually all the smaller (i.e., migratory) PFAS molecules. The result is a highly polymerized coating bound to the non-stick surface of the small kitchen appliance. Studies show negligible amounts of PFAS in this coating can migrate to food ("Authorized Uses of PFAS in Food Contact Applications", US-FDA).
- PFAS used in cookware are fluoropolymers. They are recognized as stable, chemically inert materials. Therefore, they pose a negligeable environmental impact: see Interstate Technology & Regulatory Council (ITRC), September 2023: "stable, insoluble fluoropolymer such as PTFE may pose little environmental ecological or health risk once it is in a product (Full PFAS Guidance, December 2023).

If needed, attach additional information.

Impacts on Human Health or the Environment.docx - 05/30/2025 06:53 PM

Comment

NONE PROVIDED

9. This section relates to the product's fate at the end of its lifecycle.

a. Describe the product's fate at the end of its lifecycle, including any product stewardship programs or other government imposed processes.
In the United States, 47% of cookware are recycled. This relatively low number is still higher than the level of cookware in other surveyed countries (15%).

However, according to a study of a cookware manufacturer carried out in 2024, two-thirds of consumers say they prefer channels that allow the recycling of kitchen utensils (waste disposal centers, domestic recycling, instore deposit).

This proportion for utensils is also 47% in the USA (and rises to 73% in France or 80% in Sweden). In some other cases, kitchen utensils are thrown away with household waste.

Additional Supportive Attachments

NONE PROVIDED

Comment

NONE PROVIDED

b. How is the product intended to be disposed of, such as landfilling or via a sewage or septage system?
Landfill

c. The recycling rate of the product.
80

10. This section relates to Confidential Business Information.

1. Please list the section (number) and question (letter) of submission information which contains confidential business information.

Section Number	Question Letter
5	a, 3
5	c and d
7	c, 2

Attachments

Date	Attachment Name	Context	Confidential?	User
5/30/2025 6:53 PM	Impacts on Human Health or the Environment.docx	Attachment	No	Stephen Burns
5/30/2025 6:48 PM	Reasonably Available Alternatives.docx	Attachment	No	Stephen Burns
5/30/2025 5:52 PM	Fluoropolymer properties.docx	Attachment	No	Stephen Burns

Status History

	User	Processing Status
5/30/2025 5:26:00 PM	Stephen Burns	Draft
5/30/2025 6:59:08 PM	Stephen Burns	Submitted
5/30/2025 6:59:12 PM	Stephen Burns	In Process

PFAS - Currently Unavoidable Use Proposal

version 1.2

(Submission #: HQC-JS1V-7C75E, version 1)

Details

Submission ID HQC-JS1V-7C75E
Status In Process

Form Input

1. Submitter Information. (1 of 1)

Instructions

Provide the contact information for your organization.

a. Submitter

First Name Yohann
Last Name BOILEAU
Title
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Organization Name
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b. Additional Submitter Details

If you have an additional or co-submitter, you may add them by clicking the Add New Submitter button. You can also add an additional submitter by clicking the Duplicate Submitter button, which will create a new submitter record by copying the first submitter. Duplicate Submitter details can be updated as needed.

2. Brief description of the type of product to which PFAS is intentionally added.

2a. Product Category

Product Category Name
Cookware product

The descriptive name of the product.
Non-stick fluoropolymer-coated cookware and bakeware

b. A brief narrative of the product; its physical structure; and appearance; how it functions; and if applicable, its place in larger items, systems, or processes.
This proposal is related to non-stick fluoropolymer-coated cookware and bakeware.

Non-stick fluoropolymer-coated cookware category covers products such as pots, pans, or dishes. They are composed by :
• A coated metallic part. The coating is made of fluoropolymers which provides the non-stick property because it prevents food from sticking on the cooking surface
• Handles.
They can be used on various heat sources such as stoves and the like.

Non-stick fluoropolymer-coated bakeware category covers products that are containers designed to bake food in a heated cavity e.g. oven. It also covers devices designed to bake food like pastry i.e. cakes, cookies, bread, muffins, pies; etc. They are also composed by a coated metallic part. The coating is made of fluoropolymers which provides the non-stick property.

To find your GPC Category and code, visit https://gpc-browser.gs1.org/

c. GPC Category, if applicable.

GPC Category
73040400 Cookware/Bakeware

d. GPC Code, if applicable.

GPC Code
NONE PROVIDED

e. HTS Code, if applicable.

HTS Code
7615

f. NAICS code for sector or sectors in which the products containing intentionally added PFAS will be utilized.
332215-Metal Kitchen Cookware, Utensil, Cutlery, and Flatware (except Precious) Manufacturing

3. Explanation of why the availability of PFAS in this specific product is essential for health safety or the functioning of society.

Maine defines "Essential for health, safety or the functioning of society" to mean: "a use of a PFAS in a product when the function provided by the PFAS is necessary for the product to perform as intended, such that the unavailability of the PFAS for use in the product would cause the product to be unavailable, which would result in: (1) A significant increase in negative health outcomes; (2) An inability to mitigate significant risks to human health or the environment; or (3) A significant disruption of the daily functions on which society relies."

a. An explanation of why the availability of PFAS in this specific product is essential for health safety or the functioning of society.
Non-stick fluoropolymer-coated cookware offers a unique combination of properties that not only make it a preferred choice for consumers but also contribute significantly to health safety and the smooth functioning of society.

Some key functions of such substances in a non-stick cookware application:

- Non-stick: an exceptionally strong carbon•fluorine (C•F) bond, the strongest in organic chemistry, PTFE exhibits outstanding self-lubricating and non-stick properties, along with excellent chemical and thermal resistance (cf. Rossi et al., 2022). As a result, the fluoropolymer PTFE is inherently non-stick, offering low or no fat use during cooking, ensuring predictable results by preserving food texture and preventing burning, and allowing for easy cleaning with reduced detergent and water use.
- Abrasion resistance: fluoropolymer-coatings have high abrasion resistance, due to the combination of the coating•s ductility, adhesion, and low friction.
- Heat resistance: Pyrolysis of food starts at 350 •F, while PTFE is known to start to deteriorate at an extremely slow rate above 500 •F. Above 680 •F, the degradation of PTFE starts to be measurable. It is unreasonable to expect typical cooking temperatures to be above 500 •F. Cooking temperatures are naturally limited by visible smoke, which happens at 350-500 •F. These temperatures ensure that PTFE-coated cookware has good heat resistance. According to the German Federal Office for Risk Assessment (BfR), even above 680 •F the concentration of decomposition gases resulting from PTFE-coated cookware is so low that there is no health risk for users.

The attach additional information contains additional arguments.

If needed, attach additional information.

PFAS Maine Currently Unavoidable Use Cookware_Groupe SEB - part3.docx - 05/30/2025 10:46 AM

Comment

The attach document is the complete answer to question a.

4. Description of how the specific use of PFAS in the product is essential to the function of the product.

a. Please provide a description of how and why PFAS is essential to the function of the product. (This may include a description of the negative impact that would be caused by the unavailability of PFAS for use in the product and the subsequent unavailability or unsatisfactory performance of the product).

Fluoropolymers, unlike non-polymeric PFAS, are essential components in non-stick cookware due to their unique and well-balanced combination of safety, functionality, and durability. Among them, PTFE stands out for its highly stable molecular structure, which is non-mobile, non-bio accumulative, and incapable of crossing the gastrointestinal barrier or entering human cells. When ingested, it passes through the body unchanged. These properties make PTFE safe for use in food contact materials, with no identified risks to human health.

Beyond safety, fluoropolymers offer exceptional performance characteristics, such as inherent non-stick behavior, resistance to chemicals, abrasion, heat, and corrosion. These features ensure the long-term effectiveness of cookware and support healthier cooking practices by reducing the need for added fats and enabling easier cleaning. Their role is not incidental, as fluoropolymers are indispensable for achieving reliable, high-quality, and health-conscious cookware, offering a level of convenience and longevity unmatched by current alternatives.

No material offers the characteristic as fluoropolymer, even not ceramic, in terms of durability, non-stick performance, and abrasion resistance, ultimately offering a longer product lifespan. Current ceramic technologies have yet to match this level of reliability. Studies such as Rossi et al. from 2022 attribute fluoropolymers' superior performance to the strength of the carbon–fluorine (C–F) bond, which provides better self-lubrication and higher resistance to chemical, thermal, and mechanical degradation.

Ceramic coatings rely on surface-functionalized layers that degrade relatively quickly with use, leading to faster wear, reduced performance, and shorter product life cycles (refer to point b and d of section 5), leading to higher costs (refer to point d of section 5) and greater environmental impact, both due to increased material consumption and waste.

b. Please provide a description of the specific characteristic or combination of characteristics that necessitate the use of PFAS in the product

Fluoropolymers possess a distinct chemical structure providing the following characteristics:
- a wide range of highly valuable properties, including chemical, biological, and thermal stability, resistance to heat and chemicals, unique dielectric behavior, and exceptional durability (Korzeniowski et al., 2022)
- irreplaceable in many industrial and consumer contexts, as no alternative material currently replicates their performance across such a broad spectrum of conditions (Henry et al., 2018). Their role is particularly critical in high-temperature and chemically aggressive environments, where few other materials can meet system performance requirements (Huber et al., 2019)

Among fluoropolymers, PTFE is the most widely used and generally regarded as superior in terms of performance and versatility:
- extensive regulatory testing and validation for use in food contact and medical applications. It complies with standards set by authorities including the US FDA, EU food safety regulators, Korea MFDS, Japan PMDA, and others, and has passed ISO 10993 biocompatibility assessments as well as preclinical animal testing
- flexibility and mechanical resilience ensure long-lasting performance, even with frequent use and exposure to varying cooking conditions
- chemical inertness and high thermal stability remaining non-reactive and does not degrade at typical cooking temperatures
- smooth surface and low coefficient of friction enable exceptional non-stick functionality, reducing or eliminating the need for added oils and fats and simplifying cleanup, contributing to healthier cooking practices and enhanced user convenience
- extremely low levels of residual monomers, oligomers, and low molecular weight leachables in high-quality PTFE coatings ensure compliance with stringent safety standards, minimizing any risk of contamination during food preparation, see documents in scientific literature, including Ebnesajjad (2011), Olabisi and Adewale (2015), and Henry et al. (2018)

c. If this use of PFAS in the product is required by federal or state law or regulation, please provide the following.

Type	Citation

5. Description of reasonably available alternatives for this specific use of PFAS.

Please provide a description of reasonably available alternatives for this specific use of PFAS. Include an evaluation of the following aspects in your description (attach supporting documentation if necessary).

a. Identification of specific compounds, classes of materials, or combinations of materials identified as potential alternatives including the removal of PFAS without substitution.

[redacted]

b. An assessment of how the materials listed above meet or fail to meet the criteria that necessitate the use of PFAS chemicals.

The non-stick durability and overall performance of ceramic-coated cookware remain inferior to those of fluoropolymer coatings thus fail to meet the necessary criteria:

1. A study conducted by Rossi et al, highlights that the Carbon–Fluorine (C-F) bond present in fluoropolymers is key to their superior non-stick and self-lubricating properties, as well as their resistance to both chemicals and high-temperatures - qualities that sol-gel ceramic coatings do not match (Rossi et al., 2022).

2. The same study also identified long-term reliability under regular use and mechanical wear as major limitations of sol-gel based non-stick coatings. Unlike fluoropolymers coatings, which possess inherent non-stick properties, ceramic coatings are not "intrinsically non-stick, relying only on the action of the functionalized groups of the topcoat, which can be easily removed by everyday usage." Intended to be used everyday day, ceramic coatings are more vulnerable to abrasion, degradation, and performance over time.

3. As Rossi et al. concluded, "Sol–gel coatings, despite being proposed as valid alternatives to fluoropolymer ones, do not achieve the same quality standards in terms of releasing properties, being in addition much more sensible to degradation and loss in performances." (Rossi et al., 2022)

4. Finally, consumer studies comparing ceramic and fluoropolymer non-stick cookware reveal that ceramic-coated cookware tend to wear out more quickly, leading to more frequent replacements. This reduced lifespan not only drives up long-term costs for consumers but may also result in a greater environmental impact (Palermo, A., 2020).

Specific additional and confidential information related to durability is avalaible in the attached supporting documentation.

c. An assessment of whether materials identified above are available in sufficient quantities to meet production needs.

[redacted]

d. An assessment of the anticipated cost difference between obtaining PFAS for use in the product subject to the proposal and obtaining the material identified above, for the same purpose.

[redacted]

e. A comparison of the known risks to human health and the environment between PFAS and the alternative materials identified above.

Siloxane monomers serve as critical precursors in silicone polymers production, which are extensively used across numerous industries, including in the production of so-called ceramic coatings for food contact applications. Although the manufacturing of these monomers and the development (formulation) of silicone-based polymers are global, growing concerns have brought siloxanes under increasing regulatory scrutiny.

Considering both the inherent performance shortcomings of ceramic-coated non-stick cookware, and the tightening regulatory environment surrounding siloxane monomers required for embedding silicone oils in ceramic coatings, these alternatives do not represent a workable replacement for fluoropolymer-based non-stick cookware.

f. An assessment of whether there are feasible changes to the manufacturing process of the product that would eliminate the need for PFAS.

This section provides an overview of the manufacturing methods used in the production of non-stick cookware.

According to the Fluoropolymers Product Group (FPG), a Europe-based association of global fluoropolymer producers, manufacturers have adopted advanced recovery technologies during production to significantly minimize the presence of residual primary non-polymeric PFAS. These technologies are complemented by stringent environmental and safety rules during the coating formulation phase, ensuring emissions from fluoropolymer-based dispersions are controlled. This approach supports the fluoropolymers manufacturers commitment to achieve the Average Emission Factors of non-polymeric PFAS residues from polymerization aid technology used in the fluoropolymer manufacturing process of 0.003% to air and 0.0006% to water by 2030 (FPG Manufacturing Programme, 2023).

In addition, non-polymeric PFAS are not intentionally added during the manufacturing of finished articles. Any remaining fluorinated polymerization aids are present only in trace residues. According to supplier disclosures, actual dispersions contain less than 1 ppm of fluorinated surfactants levels that fall below the detection capabilities of current analytical methods. Manufacturers also implement robust environmental controls to manage the limited potential emission points related to these substances or fluoropolymer dust. These include the use of fully enclosed processing chambers, high-efficiency filtration systems, and specialized capture-and-treatment technologies. Collectively, these measures ensure that emissions to air, water, and waste streams remain well below applicable regulatory limits.

Additional information is avalaible in the attached supporting documentation.

Attach supporting documentation if necessary,

PFAS Maine Currently Unavoidable Use Cookware_Groupe SEB - part5.docx - 05/30/2025 10:46 AM

Comment

Information related to question a3, c and is confidential.

6. List of federal regulations, other State of Maine rules, and regulations of other states which the product is subject to by reason of containing intentionally added PFAS.

a. Please provide a list of federal regulations, other State of Maine rules, and regulations of other states which the product is subject to by reason of containing intentionally added PFAS.

The only State where a law currently is banning the sale and distribution of non-stick small kitchen appliances, is Minnesota.

It has to be emphasized that a several States have exempted or are considering exempting non-stick fluoropolymers coatings:
- Delaware and West Virginia do not regulate fluoropolymers in their PFAS laws
- New Mexico enacted some weeks ago law HB 212 exempting products with fluoropolymer coating as non-stick small kitchen appliances
- Illinois is finalizing HB 2516 which bans PFAS with an exemption for non-stick small kitchen appliances
- Ohio is considering HB 272 which bans PFAS with an exemption for fluoropolymers
- California is currently debating SB 682 which exempts products with a fluoropolymer-based coating

7. List of sales prohibitions that the product is subject to because of containing intentionally added PFAS.

a. Please provide a list of sales prohibitions that the product is subject to because of containing intentionally added PFAS. If there are no sales prohibitions, please type "none" into the Product Category Name.

Product Category	Product Category Name	Prohibition Citation	Prohibition Type	Have you filed a proposal?	Proposal Status

b. If a prohibition listed above is absolute, please provide a list of comparable products that the proposer is aware of remaining available for sale, offered for sale, or distributed for sale within that specific jurisdiction.

NONE PROVIDED

c. If the prohibition cited above is absolute, please provide justification explaining how products available in compliance with that prohibition are not reasonably available alternatives for the product subject to this CUU proposal in the State of Maine.

[redacted]

d. If the prohibition cited above is absolute, please provide an explanation and supporting documentation of why those products containing PFAS alternatives listed above would not perform as intended in the State of Maine due to differing physical or climate conditions.

NONE PROVIDED

Attach additional information.

NONE PROVIDED

Comment

NONE PROVIDED

8. This section relates to information known or reasonably ascertainable by the submitter regarding the impacts on human health or the environment as a result of PFAS in the product.

a. Any information documenting impacts on human health as a result of the specific use of PFAS in the product.
PFAS used in cookware are recognized by authorities as food compliant materials. PFAS used in cookware are fluoropolymers:
- FDA: Code of Federal Regulations, Title 21, Section 177.1550 (CFR - Title 21, FDA).
- European Union: Commission Regulation (EU) No 10/2011 of 14 January 2011 on plastic materials and articles intended to come into contact with food.

Fluoropolymers used in cookware are acknowledged by regulatory authorities and numerous organizations as posing no harm to human health:
- German Federal Institute for Risk Assessment (BfR BAuA): "The BfR has no data which would indicate that, under normal usage conditions (no overheating), any PTFE-coated cookware, ovenware or frying pans currently available on the market transfer fluorinated chemicals to food in quantities suitable for endangering human health. " Selected questions and answers on cookware, ovenware and frying pans with a non-stick coating made of PTFE (FAQ, 18 December 2018).
- European Food Safety Agency (EFSA): FSA"s Scientific Committee noted that the risk assessment of polymers used in food additives"those that can be ingested"must consider molecular weight (i.e., size). EFSA states that polymers are unlikely to be absorbed through the gastrointestinal barrier and are therefore not considered a health hazard (EFSA Journal, 2016).

Therefore, PFAS used in cookware are fluoropolymers. They do not impact human health and are recognized by authorities as Food Contact Compliant.

Additional information is available the attached document.

b. Provide a description of the likely pathways of human exposure for the specific use of PFAS in the product.
Consumers using non-stick cookware are exposed to negligeable amount of PFAS through the food being prepared:
- FDA: "The manufacturing process vaporizes off virtually all the smaller (i.e., migratory) PFAS molecules. The result is a highly polymerized coating bound to the non-stick surface of cookware. Studies show negligible amounts of PFAS in this coating can migrate to food ("Authorized Uses of PFAS in Food Contact Applications", FDA).
- EFSA confirmed that fluoropolymers in contact with food are not a major source of PFAS exposure. While some migration to food is possible, the quantity would be minimal"on the order of micrograms per kilogram ("g/kg)"a level significantly lower than the background levels of PFAS typically found in food, which remain the primary source of exposure (Risk to Human Health Related to the Presence of Perfluoroalkyl Substances in Food, 9 July 2020).
- Environmental Working Group (EWG) "But even though it"s always been the poster child for PFAS exposure, this cookware is not anticipated to be a major source of exposure." (Top 3 Ways to Reduce PFAS Exposure, EWG).

During normal use, part of the coating may peel off. Those detached parts are made of fluoropolymers which are inert. This does not pose a health risk:
- German Federal Institute for Risk Assessment (BfR BAuA) : "It is still safe to health if minute particles are released from scratched coatings and swallowed when eating. As PTFE is inert, these particles are not digested and are excreted from the body unchanged (FAQ, 18 December 2018).

Therefore, human using non-stick cookware are exposed to a negligeable amount of PFAS. It does not impact human health.

c. Provide any information documenting environmental impacts because of the specific use of PFAS in the product.
PFAS used in non-stick cookware are fluoropolymers. They are recognized as stable, chemically inert materials. Therefore, they pose a negligeable environmental impact:
- Interstate Technology & Regulatory Council (ITRC), September 2023: "Stable, insoluble fluoropolymer such as PTFE may pose little environmental, ecological, or health risk once it is in a product." (Full PFAS Guidance, December 2023).

Therefore, PFAS used in non-stick cookware are fluoropolymers, recognized as stable, chemically inert materials and therefore they pose negligeable environmental impact.

d. Provide a description of any likely pathways for environmental release of PFAS because of the specific use of PFAS in the product.
During manufacturing phase, manufacturers of fluoropolymers are committed to apply best available techniques to limit emissions:
- Fluoropolymer Professional Association (FPG) has communicated in March 2025 about their achievements and continued efforts FPG. (Statement on the Manufacturing Programme 2025 - Plastics Europe including major US manufacturers).

During consumer use phase, the release of PFAS in the environment is negligeable:
- FDA: "The manufacturing process vaporizes off virtually all the smaller (i.e., migratory) PFAS molecules. The result is a highly polymerized coating bound to the non-stick surface of the small kitchen appliance. Studies show negligible amounts of PFAS in this coating can migrate to food ("Authorized Uses of PFAS in Food Contact Applications", FDA).
- PFAS used in cookware are fluoropolymers. They are recognized as stable, chemically inert materials. Therefore, they pose a negligeable environmental impact: see Interstate Technology & Regulatory Council (ITRC), September 2023: "stable, insoluble fluoropolymer such as PTFE may pose little environmental ecological or health risk once it is in a product (Full PFAS Guidance, December 2023).

Additional information is available the attached document.

If needed, attach additional information.
PFAS Maine Currently Unavoidable Use Cookware_Groupe SEB - part8.docx - 05/30/2025 10:48 AM
Comment
NONE PROVIDED

9. This section relates to the product"s fate at the end of its lifecycle.

a. Describe the product's fate at the end of its lifecycle, including any product stewardship programs or other government imposed processes.
In the United States, approximately 47% of cookware is recycled. This relatively lower rate is partly due to a higher level of donations, around 15%, compared to other countries surveyed.

A 2024 study conducted by a cookware manufacturer found that about two-thirds of consumers prefer recycling options for cookware, such as waste disposal centers, domestic recycling, or in-store drop-off points.

In the United States, this preference stands at 47% whereas it reaches 73% in france and 80% in Sweden. In other cases, cookware are simply discarded with regular household waste.

Additional Supportive Attachments
PFAS Maine Currently Unavoidable Use Cookware_Groupe SEB - part9.docx - 05/30/2025 10:45 AM
Comment
NONE PROVIDED

b. How is the product intended to be disposed of, such as landfilling or via a sewage or septage system?
Landfill
Other: See additional supportive attachment

c. The recycling rate of the product.
80

10. This section relates to Confidential Business Information.

1. Please list the section (number) and question (letter) of submission information which contains confidential business information.

Section Number	Question Letter
5	a
5	c
5	d
7	c

Attachments

Date	Attachment Name	Context	Confidential?	User
5/30/2025 10:48 AM	PFAS Maine Currently Unavoidable Use Cookware_Groupe SEB - part8.docx	Attachment	No	Yohann Boileau
5/30/2025 10:46 AM	PFAS Maine Currently Unavoidable Use Cookware_Groupe SEB - part5.docx	Attachment	No	Yohann Boileau
5/30/2025 10:46 AM	PFAS Maine Currently Unavoidable Use Cookware_Groupe SEB - part3.docx	Attachment	No	Yohann Boileau
5/30/2025 10:45 AM	PFAS Maine Currently Unavoidable Use Cookware_Groupe SEB - part9.docx	Attachment	No	Yohann Boileau

Status History

	User	Processing Status
5/14/2025 5:19:44 AM	Yohann Boileau	Draft
5/30/2025 10:49:28 AM	Yohann Boileau	Submitted
5/30/2025 10:49:32 AM	Yohann Boileau	In Process

PFAS - Currently Unavoidable Use Proposal

version 1.2

(Submission #: HQC-ZH6A-HQE84, version 1)

Details

Submission ID HQC-ZH6A-HQE84
Status In Process

Form Input

1. Submitter Information. (1 of 1)

Instructions

Provide the contact information for your organization.

a. Submitter

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b. Additional Submitter Details

If you have an additional or co-submitter, you may add them by clicking the Add New Submitter button. You can also add an additional submitter by clicking the Duplicate Submitter button, which will create a new submitter record by copying the first submitter. Duplicate Submitter details can be updated as needed.

2. Brief description of the type of product to which PFAS is intentionally added.

2a. Product Category

Product Category Name
Cookware product

The descriptive name of the product.
Small kitchen appliances with non-stick fluoropolymer-coated surfaces.

b. A brief narrative of the product; its physical structure; and appearance; how it functions; and if applicable, its place in larger items, systems, or processes.
This proposal is related to small kitchen appliances with non-stick fluoropolymer-coated surfaces that are in direct contact with food.

This product category encompasses several subcategories as:
- Food preparation appliances i.e. kitchen machines, blenders, food processors and the like;
- Cooking appliances i.e., portable oven, rice cooker, portable barbeques, plancha, toaster and grills and the like;
- Beverage appliances i.e. espresso makers, coffee makers and the like.

These appliances are hand-held or used on bench. When not in use they can be stored in kitchen cabinet or drawer. Therefore, they must be compact, light and/or portable. They are aimed to process, cook and/or store food.

Some of these products are to be considered as ﷺcookwareﷺ according to the PFAS Maineﷺs regulation related to PFAS.

To find your GPC Category and code, visit https://gpc-browser.gs1.org/

c. GPC Category, if applicable.

GPC Category
72020100 small cooking/heating appliances

d. GPC Code, if applicable.

GPC Code
NONE PROVIDED

e. HTS Code, if applicable.

HTS Code

f. NAICS code for sector or sectors in which the products containing intentionally added PFAS will be utilized.
335210-Small Electrical Appliance Manufacturing

3. Explanation of why the availability of PFAS in this specific product is essential for health safety or the functioning of society.

Maine defines "Essential for health, safety or the functioning of society" to mean: "a use of a PFAS in a product when the function provided by the PFAS is necessary for the product to perform as intended, such that the unavailability of the PFAS for use in the product would cause the product to be unavailable, which would result in: (1) A significant increase in negative health outcomes; (2) An inability to mitigate significant risks to human health or the environment; or (3) A significant disruption of the daily functions on which society relies."

a. An explanation of why the availability of PFAS in this specific product is essential for health safety or the functioning of society.
Fluoropolymer-coated small kitchen appliances offer a unique combination of properties that not only make it a preferred choice for consumers but also contribute significantly to health safety and the smooth functioning of society.

Some key functions of such substances in a non-stick small kitchen appliances application:

- Non-stick: an exceptionally strong carbonﷺfluorine (CﷺF) bond, the strongest in organic chemistry, PTFE exhibits outstanding self-lubricating and non-stick properties, along with excellent chemical and thermal resistance (cf. Rossi et al., 2022). As a result, the fluoropolymer PTFE is inherently non-stick, offering low or no fat use during cooking, ensuring predictable results by preserving food texture and preventing burning, and allowing for easy cleaning with reduced detergent and water use.
- Abrasion resistance: fluoropolymer-coatings have high abrasion resistance, due to the combination of the coatingﷺs ductility, adhesion, and low friction.
- Heat resistance: Pyrolysis of food starts at 350 ﷺF, while PTFE is known to start to deteriorate at an extremely slow rate above 500 ﷺF. Above 680 ﷺF, the degradation of PTFE starts to be measurable. It is unreasonable to expect typical cooking temperatures to be above 500 ﷺF. Cooking temperatures are naturally limited by visible smoke, which happens at 350-500 ﷺF. These temperatures ensure that PTFE-coated cookware has good heat resistance. According to the German Federal Office for Risk Assessment (BfR), even above 680 ﷺF the concentration of decomposition gases resulting from PTFE-coated cookware is so low that there is no health risk for users.

A complete answer is provided in the attached additional information.

If needed, attach additional information.

PFAS Maine Currently Unavoidable Use kitchen appliances - part3.docx - 05/30/2025 11:10 AM

Comment

Complete answer to question 3a

4. Description of how the specific use of PFAS in the product is essential to the function of the product.

a. Please provide a description of how and why PFAS is essential to the function of the product. (This may include a description of the negative impact that would be caused by the unavailability of PFAS for use in the product and the subsequent unavailability or unsatisfactory performance of the product).

Fluoropolymers, unlike non-polymeric PFAS, are essential components in non-stick small kitchen appliances due to their unique and well-balanced combination of safety, functionality, and durability. Among them, PTFE stands out for its highly stable molecular structure, which is non-mobile, non-bio accumulative, and incapable of crossing the gastrointestinal barrier or entering human cells. When ingested, it passes through the body unchanged. These properties make PTFE safe for use in food contact materials, with no identified risks to human health

Beyond safety, fluoropolymers offer exceptional performance characteristics, such as inherent non-stick behavior, resistance to chemicals, abrasion, heat, and corrosion. These features ensure the long-term effectiveness of small kitchen appliances and support healthier cooking practices by reducing the need for added fats and enabling easier cleaning. Their role is not incidental, as fluoropolymers are indispensable for achieving reliable, high-quality, and health-conscious kitchen appliances, offering a level of convenience and longevity unmatched by current alternatives

No material offers the characteristics of fluoropolymer, even not ceramic, in terms of durability, non-stick performance, and abrasion resistance, ultimately offering a longer product lifespan. Current ceramic technologies have yet to match this level of reliability. Studies such as Rossi et al. from 2022 attribute fluoropolymers superior performance to the strength of the carbon fluorine (C F) bond, which provides better self-lubrication and higher resistance to chemical, thermal, and mechanical degradation

Ceramic coatings rely on surface-functionalized layers that degrade relatively quickly with use, leading to faster wear, reduced performance, and shorter product life cycles (refer to point b and d of section 5), leading to higher costs (see point d of section 5) and greater environmental impact, both due to increased material consumption and waste

b. Please provide a description of the specific characteristic or combination of characteristics that necessitate the use of PFAS in the product

Fluoropolymers possess a distinct chemical structure providing the following characteristics:
- a wide range of highly valuable properties, including chemical, biological, and thermal stability, resistance to heat and chemicals, unique dielectric behavior, and exceptional durability (Korzeniowski et al., 2022)
- irreplaceable in many industrial and consumer contexts, as no alternative material currently replicates their performance across such a broad spectrum of conditions (Henry et al., 2018). Their role is particularly critical in high-temperature and chemically aggressive environments, where few other materials can meet system performance requirements (Huber et al., 2019)

Among fluoropolymers, PTFE is the most widely used and generally regarded as superior in terms of performance and versatility:
- extensive regulatory testing and validation for use in food contact and medical applications. It complies with standards set by authorities including the US FDA, EU food safety regulators, Korea MFDS, Japan PMDA, and others, and has passed ISO 10993 biocompatibility assessments as well as preclinical animal testing
- flexibility and mechanical resilience ensure long-lasting performance, even with frequent use and exposure to varying cooking conditions
- chemical inertness and high thermal stability remaining non-reactive and does not degrade at typical cooking temperatures
- smooth surface and low coefficient of friction enable exceptional non-stick functionality, reducing or eliminating the need for added oils and fats and simplifying cleanup, contributing to healthier cooking practices and enhanced user convenience
- extremely low levels of residual monomers, oligomers, and low molecular weight leachables in high-quality PTFE coatings ensure compliance with stringent safety standards, minimizing any risk of contamination during food preparation, see documents in scientific literature, including Ebnesajjad (2011), Olabisi and Adewale (2015), and Henry et al. (2018)

c. If this use of PFAS in the product is required by federal or state law or regulation, please provide the following.

Type	Citation

5. Description of reasonably available alternatives for this specific use of PFAS.

Please provide a description of reasonably available alternatives for this specific use of PFAS. Include an evaluation of the following aspects in your description (attach supporting documentation if necessary).

a. Identification of specific compounds, classes of materials, or combinations of materials identified as potential alternatives including the removal of PFAS without substitution.
Materials such as cast iron, stainless steel, and raw aluminum do not possess natural non-stick capabilities. While they may be valued for their ability to retain heat and withstand wear, these materials generally need to be seasoned regularly or used with oil to reduce food adhesion. As a result, they fall short of the convenience and low-maintenance expectations that consumers have. Therefore, these materials are not suitable alternatives for non-stick fluoropolymer-based coatings used in small kitchen appliances.

Regarding more specifically ceramic coatings, they are mistakenly regarded as a suitable substitution for fluoropolymer-based non-stick surfaces used in small kitchen appliances in contact with food. However, extensive research and repeated consumer testing have shown that ceramic alternatives do not measure up, particularly in terms of non-stick durability and overall performance over time. Because of this, ceramic-coated appliances often wear out faster and need to be replaced sooner, which may increase both environmental impact and long-term consumer costs. Further details are provided in point b in section 5.

[redacted]

[redacted]

b. An assessment of how the materials listed above meet or fail to meet the criteria that necessitate the use of PFAS chemicals.
The non-stick durability and overall performance of non-stick ceramic-coated surfaces in small kitchen appliances remain inferior to those of fluoropolymer coatings thus fail to meet the necessary criteria:

1. A study conducted by Rossi et al, highlights that the Carbon–Fluorine (C-F) bond present in fluoropolymers is key to their superior non-stick and self-lubricating properties, as well as their resistance to both chemicals and high-temperatures - qualities that sol-gel ceramic coatings do not match (Rossi et al., 2022).

2. The same study also identified long-term reliability under regular use and mechanical wear as major limitations of sol-gel based non-stick coatings. Unlike fluoropolymers coatings, which possess inherent non-stick properties, ceramic coatings are not “intrinsically non-stick, relying only on the action of the functionalized groups of the topcoat, which can be easily removed by everyday usage.” Intended to be used everyday day, ceramic coatings are more vulnerable to abrasion, degradation, and performance over time.

3. As Rossi et al. concluded, “Sol–gel coatings, despite being proposed as valid alternatives to fluoropolymer ones, do not achieve the same quality standards in terms of releasing properties, being in addition much more sensible to degradation and loss in performances.” (Rossi et al., 2022)

4. Finally, consumer studies comparing ceramic and fluoropolymer non-stick surfaces used in small kitchen appliances (in contact with food) reveal that ceramic-coated surfaces tend to wear out more quickly, leading to more frequent replacements (of the part of the product). This reduced lifespan not only drives up long-term costs for consumers but may also result in a greater environmental impact (Palermo, A., 2020).

Specific additional and confidential information on durability is available in the attached supporting documentation.

c. An assessment of whether materials identified above are available in sufficient quantities to meet production needs.

[redacted]

[redacted]

[redacted]

d. An assessment of the anticipated cost difference between obtaining PFAS for use in the product subject to the proposal and obtaining the material identified above, for the same purpose.

[redacted]

e. A comparison of the known risks to human health and the environment between PFAS and the alternative materials identified above.

Siloxane monomers serve as critical precursors in silicone polymers production, which are extensively used across numerous industries, including in the production of so-called ceramic coatings for food contact applications, including in small kitchen appliances. Although the manufacturing of these monomers and the development (formulation) of silicone-based polymers are global, growing concerns have brought siloxanes under increasing regulatory scrutiny.

Considering both the inherent performance shortcomings of ceramic-coating for non-stick surfaces in small kitchen appliances, and the tightening regulatory environment surrounding siloxane monomers required for embedding silicone oils in ceramic coatings, these alternatives do not represent a workable replacement for fluoropolymer-based non-stick components in small kitchen appliances.

f. An assessment of whether there are feasible changes to the manufacturing process of the product that would eliminate the need for PFAS.

This section provides an overview of the manufacturing methods of small kitchen appliances with non-stick fluoropolymer-coated surfaces.

According to the Fluoropolymers Product Group (FPG), a Europe-based association of global fluoropolymer producers, manufacturers have adopted advanced recovery technologies during production to significantly minimize the presence of residual primary non-polymeric PFAS. These technologies are complemented by stringent environmental and safety rules during the coating formulation phase, ensuring emissions from fluoropolymer-based dispersions are controlled. This approach supports the fluoropolymers manufacturers commitment to achieve the Average Emission Factors of non-polymeric PFAS residues from polymerization aid technology used in the fluoropolymer manufacturing process of 0.003% to air and 0.0006% to water by 2030 (FPG Manufacturing Programme, 2023).

In addition, non-polymeric PFAS are not intentionally added during the manufacturing of finished articles. Any remaining fluorinated polymerization aids are present only in trace residues. According to supplier disclosures, actual dispersions contain less than 1 ppm of fluorinated surfactants levels that fall below the detection capabilities of current analytical methods. Manufacturers also implement robust environmental controls to manage the limited potential emission points related to these substances or fluoropolymer dust. These include the use of fully enclosed processing chambers, high-efficiency filtration systems, and specialized capture-and-treatment technologies. Collectively, these measures ensure that emissions to air, water, and waste streams remain well below applicable regulatory limits.

Additional information is available in the attached supporting documentation.

Attach supporting documentation if necessary,

PFAS Maine Currently Unavoidable Use kitchen appliances - part5.docx - 05/30/2025 11:15 AM

Comment

Confidential

6. List of federal regulations, other State of Maine rules, and regulations of other states which the product is subject to by reason of containing intentionally added PFAS.

a. Please provide a list of federal regulations, other State of Maine rules, and regulations of other states which the product is subject to by reason of containing intentionally added PFAS.
The only State where a law currently is banning the sale and distribution of non-stick small kitchen appliances, is Minnesota.

It has to be emphasized that a several States have exempted or are considering exempting non-stick fluoropolymers coatings:
- Delaware and West Virginia do not regulate fluoropolymers in their PFAS laws
- New Mexico enacted some weeks ago law HB 212 exempting products with fluoropolymer coating as non-stick small kitchen appliances
- Illinois is finalizing HB 2516 which bans PFAS with an exemption for non-stick small kitchen appliances
- Ohio is considering HB 272 which bans PFAS with an exemption for fluoropolymers
- California is currently debating SB 682 which exempts products with a fluoropolymer-based coating

7. List of sales prohibitions that the product is subject to because of containing intentionally added PFAS.

a. Please provide a list of sales prohibitions that the product is subject to because of containing intentionally added PFAS. If there are no sales prohibitions, please type "none" into the Product Category Name.

Product Category	Product Category Name	Prohibition Citation	Prohibition Type	Have you filed a proposal?	Proposal Status

b. If a prohibition listed above is absolute, please provide a list of comparable products that the proposer is aware of remaining available for sale, offered for sale, or distributed for sale within that specific jurisdiction.
Products available in compliance with the prohibition are not reasonably available alternatives for small kitchen appliances with non-stick fluropolymer-coated surfaces. We can distinguish two categories of products, products with ceramic coating and products with traditional materials as glass, metals cast irons and the like. Both are not workable alternatives.

Ceramic coating:
Non-stick ceramic-coated surfaces which are wrongly considered as a workable alternative last two time less that non-stick fluropolymer-coated surfaces. This is due to that the non-stick property comes from the addition of oils in the ceramic coating. Use after use, these oils will no longer be present in the ceramic resulting in a loss of non-stick properties. There are negative impacts for Maine consumers:
- surfaces with ceramics coating will be discarded and replaced 2 times more frequently (see question 5b)
- from a cost perspective, users will have to spend more money
- more waste will be generated

In addition, the oils used in ceramic coatings notably the impacts on a long-term, have not been studied unlike fluoropolymer especially PTFE, that have been studied for decades. It would make no sense to substitute fluoropolymer coatings that are safe by ceramic coatings whose effects are not known at the same detailed level. Replacing a mature technology by a technology that has not been subject to the same scrutiny is likely to lead to a regrettable substitution. Chemical public policy shall be based on robust and comparable set of data.

Traditional materials:
Materials such as metals, cast-iron, glass do not have non-stick properties. To avoid food sticking on the cooking surfaces, the addition of fatty food is needed such as oil butter. It has been demonstrated that the use of fatty food when cooking and preparing food has negative impact on health. Heating oil or butter leads to create free radicals which have adverse effects on human health.

c. If the prohibition cited above is absolute, please provide justification explaining how products available in compliance with that prohibition are not reasonably available alternatives for the product subject to this CUU proposal in the State of Maine.
NONE PROVIDED

d. If the prohibition cited above is absolute, please provide an explanation and supporting documentation of why those products containing PFAS alternatives listed above would not perform as intended in the State of Maine due to differing physical or climate conditions.
NONE PROVIDED

Attach additional information.
NONE PROVIDED
Comment
NONE PROVIDED

8. This section relates to information known or reasonably ascertainable by the submitter regarding the impacts on human health or the environment as a result of PFAS in the product.

a. Any information documenting impacts on human health as a result of the specific use of PFAS in the product.
PFAS used in small kitchen appliances are recognized by authorities as food compliant materials. PFAS used in small kitchen appliances with non-stick surfaces are fluoropolymers:
- FDA: Code of Federal Regulations, Title 21, Section 177.1550 (CFR - Title 21, FDA).
- European Union: Commission Regulation (EU) No 10/2011 of 14 January 2011 on plastic materials and articles intended to come into contact with food.

Fluoropolymers used in small kitchen appliances with non-stick surfaces are acknowledged by regulatory authorities and numerous organizations as posing no harm to human health:
- German Federal Institute for Risk Assessment (BfR BAuA): The BfR has no data which would indicate that, under normal usage conditions (no overheating), any PTFE-coated small kitchen appliances currently available on the market transfer fluorinated chemicals to food in quantities suitable for endangering human health (FAQ, December 2018).
- European Food Safety Agency (EFSA): noted that the risk assessment of polymers used in food additives—those that can be ingested—must consider molecular weight (i.e., size). EFSA states that polymers are "unlikely to be absorbed through the gastrointestinal barrier and are therefore not considered a health hazard" (EFSA Journal, 2016).

Therefore, PFAS used in small kitchen appliances with non-stick coated surfaces are fluoropolymers. They do not impact human health and are recognized by authorities as Food Contact Compliant.

Complete answer available in the attached additional information.

b. Provide a description of the likely pathways of human exposure for the specific use of PFAS in the product.
Consumers using small kitchen appliances with non-stick fluoropolymer-coated surfaces are exposed to negligeable amount of PFAS through the food being prepared:
- FDA: "The manufacturing process vaporizes off virtually all the smaller (i.e., migratory) PFAS molecules. The result is a highly polymerized coating bound to the non-stick surface of the small kitchen appliance. Studies show negligible amounts of PFAS in this coating can migrate to food ("Authorized Uses of PFAS in Food Contact Applications", FDA)
- EFSA confirmed that fluoropolymers in contact with food are not a major source of PFAS exposure. While some migration to food is possible, the quantity would be minimal—on the order of micrograms per kilogram (µg/kg)—a level significantly lower than the background levels of PFAS typically found in food, which remain the primary source of exposure (Risk to Human Health Related to the Presence of Perfluoroalkyl Substances in Food, 9 July 2020).
- Environmental Working Group (EWG), "But even though it's always been the poster child for PFAS exposure, this small kitchen appliance is not anticipated to be a major source of exposure." (Top 3 Ways to Reduce PFAS Exposure, EWG).

During normal use, part of the coating may peel off. Those detached parts are made of fluoropolymers which are inert. This does not pose a health risk:
- German Federal Institute for Risk Assessment (BfR BAuA) : "It is still safe to health if minute particles are released from scratched coatings and swallowed when eating. As PTFE is inert, these particles are not digested and are excreted from the body unchanged (FAQ, 18 December 2018).

Therefore, human using small kitchen appliances with non-stick fluoropolymer-coated surfaces are exposed to a negligeable amount of PFAS. It does not impact human health.

c. Provide any information documenting environmental impacts because of the specific use of PFAS in the product.
PFAS used in small kitchen appliances with non-stick surfaces are fluoropolymers. They are recognized as stable, chemically inert materials. Therefore, they pose a negligeable environmental impact:
- Interstate Technology & Regulatory Council (ITRC), September 2023: "Stable, insoluble fluoropolymer such as PTFE may pose little environmental, ecological, or health risk once it is in a product." (Full PFAS Guidance, December 2023).

Therefore, PFAS used in small kitchen appliances with non-stick surfaces are fluoropolymers, recognized as stable, chemically inert materials and therefore they pose negligeable environmental impact.

d. Provide a description of any likely pathways for environmental release of PFAS because of the specific use of PFAS in the product.

During manufacturing phase, manufacturers of fluoropolymers coating are committed to apply best available techniques to limit emissions:
- Fluoropolymer Professional Association (FPG) haq communicated in March 2025 about their achievements and continued efforts. (Statement on the Manufacturing Programme 2025 - Plastics Europe including major US manufacturers).

During consumer use phase, the release of PFAS in the environment is negligeable:
- FDA: "The manufacturing process vaporizes off virtually all the smaller (i.e., migratory) PFAS molecules. The result is a highly polymerized coating bound to the non-stick surface of the small kitchen appliance. Studies show negligible amounts of PFAS in this coating can migrate to food ("Authorized Uses of PFAS in Food Contact Applications", FDA)
- PFAS used in small kitchen appliances with non-stick surfaces are fluoropolymers are recognized as stable, chemically inert materials and pose a negligeable environmental impact: see Interstate Technology & Regulatory Council (ITRC), September 2023: "stable, insoluble fluoropolymer such as PTFE may pose little environmental ecological or health risk once it is in a product (Full PFAS Guidance, December 2023).

More detailed information is available in Section 9.

Therefore, pathways for environmental release of PFAS used in small kitchen appliances with non-stick fluoropolymer-coated surfaces are negligeable and when occurring are controlled and minimized using best available techniques prescribed by authorities.

Complete answer available in the attached additional information.

If needed, attach additional information.

PFAS Maine Currently Unavoidable Use kitchen appliances - part8.docx - 05/30/2025 11:27 AM

Comment

NONE PROVIDED

9. This section relates to the product"s fate at the end of its lifecycle.

a. Describe the product's fate at the end of its lifecycle, including any product stewardship programs or other government imposed processes.

At the end of their lifecycle, small domestic appliances (SDAs), including kitchen appliances, can follow various disposal routes, largely depending on consumer habits, the presence of product stewardship initiatives, and local regulatory frameworks. Some examples:
" Some small domestic appliances (SDAs) are discarded in landfills because consumers are either unaware of proper recycling methods or lack access to suitable recycling facilities. The most common scenario occurs when consumers dispose of SDAs along with their regular household waste.
" Consumers have the option to take their appliances to designated recycling centers, where the products are dismantled, hazardous materials are safely managed, and valuable resources such as metals are recovered. This recycling process plays an important role in minimizing environmental impact.
" Certain manufacturers provide take-back schemes that enable consumers to return their used appliances, ensuring these items are recycled responsibly.

Additional Supportive Attachments

PFAS Maine Currently Unavoidable Use kitchen appliances - part9.docx - 05/30/2025 11:28 AM

Comment

NONE PROVIDED

b. How is the product intended to be disposed of, such as landfilling or via a sewage or septage system?

Landfill
Other: See additional supportive attachment of question a

c. The recycling rate of the product.

80

10. This section relates to Confidential Business Information.

1. Please list the section (number) and question (letter) of submission information which contains confidential business information.

Section Number	Question Letter
5	a (last paragraph)

Section Number	Question Letter
5	c
5	d
7	c

Attachments

Date	Attachment Name	Context	Confidential?	User
5/30/2025 11:28 AM	PFAS Maine Currently Unavoidable Use kitchen appliances - part9.docx	Attachment	No	Yohann Boileau
5/30/2025 11:27 AM	PFAS Maine Currently Unavoidable Use kitchen appliances - part8.docx	Attachment	No	Yohann Boileau
5/30/2025 11:15 AM	PFAS Maine Currently Unavoidable Use kitchen appliances - part5.docx	Attachment	No	Yohann Boileau
5/30/2025 11:10 AM	PFAS Maine Currently Unavoidable Use kitchen appliances - part3.docx	Attachment	No	Yohann Boileau

Status History

	User	Processing Status
5/30/2025 10:52:22 AM	Yohann Boileau	Draft
5/30/2025 11:29:27 AM	Yohann Boileau	Submitted
5/30/2025 11:29:32 AM	Yohann Boileau	In Process

PFAS - Currently Unavoidable Use Proposal

version 1.2

(Submission #: HQC-XVWW-DVJ0F, version 1)

Details

Submission ID HQC-XVWW-DVJ0F
Status In Process

Form Input

1. Submitter Information. (1 of 1)

Instructions

Provide the contact information for your organization.

a. Submitter

First Name John
Last Name Keane
Title
NONE PROVIDED
Organization Name
Association of Home Appliance Manufacturers

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Business	202-872-5955	328

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b. Additional Submitter Details

If you have an additional or co-submitter, you may add them by clicking the Add New Submitter button. You can also add an additional submitter by clicking the Duplicate Submitter button, which will create a new submitter record by copying the first submitter. Duplicate Submitter details can be updated as needed.

2. Brief description of the type of product to which PFAS is intentionally added.

2a. Product Category

Product Category Name
Cookware product

The descriptive name of the product.
Coffee Makers

b. A brief narrative of the product; its physical structure; and appearance; how it functions; and if applicable, its place in larger items, systems, or processes.
Cooking appliance that is used to brew coffee; average height of a standard coffee maker is around 12 to 15 inches but can vary depending on the specific model.

To find your GPC Category and code, visit https://gpc-browser.gs1.org/

c. GPC Category, if applicable.

GPC Category
NONE PROVIDED

d. GPC Code, if applicable.

GPC Code
NONE PROVIDED

e. HTS Code, if applicable.

HTS Code
8516.71.00

f. NAICS code for sector or sectors in which the products containing intentionally added PFAS will be utilized.
335210-Small Electrical Appliance Manufacturing

3. Explanation of why the availability of PFAS in this specific product is essential for health safety or the functioning of society.

Maine defines "Essential for health, safety or the functioning of society" to mean: "a use of a PFAS in a product when the function provided by the PFAS is necessary for the product to perform as intended, such that the unavailability of the PFAS for use in the product would cause the product to be unavailable, which would result in: (1) A significant increase in negative health outcomes; (2) An inability to mitigate significant risks to human health or the environment; or (3) A significant disruption of the daily functions on which society relies."

a. An explanation of why the availability of PFAS in this specific product is essential for health safety or the functioning of society.
Coffee makers play a central role in American homes and businesses. Coffee is consumed daily by millions of Americans every day and coffee makers provide households and workplaces a quick and easy way to brew coffee for multiple people. Often, owning a coffee maker can be more cost-effective than purchasing coffee from outside sources as consumers can choose the type of coffee, quantity, and minimize waste.

Several states have enacted prohibitions of intentionally added PFAS in cookware, but Maine is the first state to include coffee makers. With Maine being the first state, manufacturers are trying to adapt, but this ban could cause a disruption to Maine's supply of coffee makers. As coffee maker manufacturers learned of the inclusion of food contact surfaces inside coffee and espresso makers April into May 2025 through the adoption of Chapter 90-Products Containing Perfluoroalkyl and Polyfluoroalkyl Substances with subsequent meetings and guidance, manufacturers are worried that many coffee makers would not be available to be sold by January 2026. The issue is that the selection, testing, and validation of alternative materials takes years. This quick ban could lead to a significant disruption in the availability of coffee makers and could affect the daily functions of Maine consumers.

If needed, attach additional information.
NONE PROVIDED
Comment
NONE PROVIDED

4. Description of how the specific use of PFAS in the product is essential to the function of the product.

a. Please provide a description of how and why PFAS is essential to the function of the product. (This may include a description of the negative impact that would be caused by the unavailability of PFAS for use in the product and the subsequent unavailability or unsatisfactory performance of the product).
CAS: 9002-84-0, Ethene, tetrafluoro-, homopolymer (PTFE)

CAS: 25067-11-2, 1-Propene, 1,1,2,3,3,3-hexafluoro-, polymer with tetrafluoroethene (FEP)

CAS: 24937-79-9, Ethene, 1,1-difluoro-, homopolymer (Poly(vinylidene fluoride)) (PVDF)

CAS: 9011-17-0, 1-Propene, 1,1,2,3,3,3-hexafluoro-, polymer with 1,1-difluoroethene (FKM)

These PFAS fluoropolymers are used in coffee makers parts like tubing, gaskets, solenoid valves and vibrating pumps and are essential because of their exceptional properties such as chemical stability, resistance to high pressure, durability and maintenance through higher temperatures, & long-lasting non-stick and self-lubricating properties.

The Food and Drug Administration has authorized fluoropolymers for use in food contact applications. Just in January 2025, the FDA confirmed that fluoropolymers intended for use in the manufacture of coated cookware and food contact seals are approved and do not pose a safety risk, as they are made of polymerized molecules.

https://www.fda.gov/food/process-contaminants-food/authorized-uses-pfas-food-contact-applications

https://www.fda.gov/food/process-contaminants-food/questions-and-answers-pfas-food

b. Please provide a description of the specific characteristic or combination of characteristics that necessitate the use of PFAS in the product
PTFE in piping/tubing is often used in coffee machines to transfer hot water, steam, and coffee due to their resistance to high pressure, high temperature, and chemical stability.

PTFE coating on components like pumps and valves used for long-lasting non-stick and self-lubricating properties.

FEP and PVDF in piping and connectors used for resistance to high pressure, high temperature, and chemical stability.

FKM in gaskets and O-rings are used for chemical stability, long durability, resistance to high pressure and high temperature. This PFAS is often used for electrical insulation.

c. If this use of PFAS in the product is required by federal or state law or regulation, please provide the following.

Type	Citation
Not Applicable	*NONE PROVIDED*

5. Description of reasonably available alternatives for this specific use of PFAS.

Please provide a description of reasonably available alternatives for this specific use of PFAS. Include an evaluation of the following aspects in your description (attach supporting documentation if necessary).

a. Identification of specific compounds, classes of materials, or combinations of materials identified as potential alternatives including the removal of PFAS without substitution.
The PFAS fluoropolymers mentioned may potentially be replaced by alternative materials such as reinforced silicon, non-PFAS polymers and ceramics which do not offer the same combination of properties such as resistance to high pressure and temperature and resistance to friction. For example, silicone tubing has a tendency to dry out and become brittle over time, especially subjected to heat for prolonged periods. This could create potential leakage and would potentially require the coffee maker to be replaced.

b. An assessment of how the materials listed above meet or fail to meet the criteria that necessitate the use of PFAS chemicals.
Decreased durability could lead to coffee makers breaking down and increased waste

c. An assessment of whether materials identified above are available in sufficient quantities to meet production needs.
Assessing alternatives have not been sought as this is the first state to enact a ban impacting coffee makers.

d. An assessment of the anticipated cost difference between obtaining PFAS for use in the product subject to the proposal and obtaining the material identified above, for the same purpose.
The alternatives mentioned have not yet been fully tested so the true cost is unclear. The time required to identify, source, test, and validate alternative materials can take several years and could be costly for manufacturers.

e. A comparison of the known risks to human health and the environment between PFAS and the alternative materials identified above.
N/A

f. An assessment of whether there are feasible changes to the manufacturing process of the product that would eliminate the need for PFAS.
The manufacturing process will likely remain the same, but the materials used for particular components purchased from external suppliers will change. The reason for this is that the fluoropolymers used are not additives or additional chemical elements used in the process; rather, they are used in the appliances as a base material for making components or coatings with specific technical features. Therefore, manufacturers cannot eliminate any PFAS fluoropolymers through a change in the manufacturing process alone, as full design and supply chain changes would be required.

Attach supporting documentation if necessary,
NONE PROVIDED
Comment
NONE PROVIDED

6. List of federal regulations, other State of Maine rules, and regulations of other states which the product is subject to by reason of containing intentionally added PFAS.

a. Please provide a list of federal regulations, other State of Maine rules, and regulations of other states which the product is subject to by reason of containing intentionally added PFAS.
The FDA regulates substances that come into contact with food, including food packaging and processing materials. This includes tubing used in espresso machines, coffee makers, and other food-related equipment.
Food contact parts and materials of coffee machines shall comply with: FDA - CFR21 – Code of Federal Regulations, Title 21, Food & Drug, Vol.3, Chapter I, Parts 170-199 as well as applicable raw materials restrictions and registration managed by FDA (e.g. Gras, FCN - Food Contact Notice, FCS - Food Contact Substances).

Relative to safety standards, domestic coffee machines also comply with UL 1082 where components shall be resistant to thermal degradation at maximum temperature to which it is exposed during normal use of the appliance.

At the state level, in 2023, Minnesota enacted Amara–s Law which included a 2025 ban on 11 product categories including cookware. The products listed in the law relative to cookware are the same under Maine–s law: "Cookware" means durable houseware items used to prepare, dispense, or store food, foodstuffs, or beverages. Cookware includes but is not limited to pots, pans, skillets, grills, baking sheets, baking molds, trays, bowls, and cooking utensils.
However, in subsequent meetings on guidance, the Minnesota Pollution Control Agency made clear –an electric coffee machine is not included because it does not match well with any of the listed items.–
https://www.pca.state.mn.us/sites/default/files/20240725-presentation-pfas-prohibitions.pdf

7. List of sales prohibitions that the product is subject to because of containing intentionally added PFAS.

a. Please provide a list of sales prohibitions that the product is subject to because of containing intentionally added PFAS. If there are no sales prohibitions, please type "none" into the Product Category Name.

Product Category	Product Category Name	Prohibition Citation	Prohibition Type	Have you filed a proposal?	Proposal Status
Cookware product	Coffee Makers	*NONE PROVIDED*	*NONE PROVIDED*		

b. If a prohibition listed above is absolute, please provide a list of comparable products that the proposer is aware of remaining available for sale, offered for sale, or distributed for sale within that specific jurisdiction.
NONE PROVIDED

c. If the prohibition cited above is absolute, please provide justification explaining how products available in compliance with that prohibition are not reasonably available alternatives for the product subject to this CUU proposal in the State of Maine.
NONE PROVIDED

d. If the prohibition cited above is absolute, please provide an explanation and supporting documentation of why those products containing PFAS alternatives listed above would not perform as intended in the State of Maine due to differing physical or climate conditions.

NONE PROVIDED

Attach additional information.

NONE PROVIDED

Comment

NONE PROVIDED

8. This section relates to information known or reasonably ascertainable by the submitter regarding the impacts on human health or the environment as a result of PFAS in the product.

a. Any information documenting impacts on human health as a result of the specific use of PFAS in the product.

NONE PROVIDED

b. Provide a description of the likely pathways of human exposure for the specific use of PFAS in the product.

NONE PROVIDED

c. Provide any information documenting environmental impacts because of the specific use of PFAS in the product.

NONE PROVIDED

d. Provide a description of any likely pathways for environmental release of PFAS because of the specific use of PFAS in the product.

NONE PROVIDED

If needed, attach additional information.

NONE PROVIDED

Comment

NONE PROVIDED

9. This section relates to the product's fate at the end of its lifecycle.

a. Describe the product's fate at the end of its lifecycle, including any product stewardship programs or other government imposed processes.

Many consumers have a coffee maker that has stopped working. The challenge with disposing of old coffee machines is that it is not simple as throwing them in the trash. Most coffee makers are made of recyclable materials like plastic, metal, and glass, but they are considered e-waste and require special handling. Many localities may have e-waste programs in place.

Recycling rate below is challenging as there are parts of the coffee maker that are disposed differently.

Additional Supportive Attachments

NONE PROVIDED

Comment

NONE PROVIDED

b. How is the product intended to be disposed of, such as landfilling or via a sewage or septage system?

Landfill

c. The recycling rate of the product.

5

10. This section relates to Confidential Business Information.

1. Please list the section (number) and question (letter) of submission information which contains confidential business information.

Section Number	Question Letter
NONE PROVIDED	*NONE PROVIDED*

Status History

Status History

	User	Processing Status
5/28/2025 8:00:22 AM	John Keane	Draft
5/30/2025 2:50:43 PM	John Keane	Submitted
5/30/2025 2:50:52 PM	John Keane	In Process

PFAS - Currently Unavoidable Use Proposal

version 1.2

(Submission #: HQC-ZKB4-SGASS, version 2)

Details

Submission ID	HQC-ZKB4-SGASS
Status	In Process

Form Input

1. Submitter Information. (1 of 2)

Instructions

Provide the contact information for your organization.

a. Submitter

First Name Leah
Last Name Sober

Title
NONE PROVIDED

Organization Name
S.C. Johnson and Son Inc.

Phone Type	Number	Extension
Business	2622602000	3546

Email
lmsober@scj.com

Mailing Address

1525 HOWE ST

RACINE, WI 53403-2237

b. Additional Submitter Details

If you have an additional or co-submitter, you may add them by clicking the Add New Submitter button. You can also add an additional submitter by clicking the Duplicate Submitter button, which will create a new submitter record by copying the first submitter. Duplicate Submitter details can be updated as needed.

1. Submitter Information. (2 of 2)

Instructions

Provide the contact information for your organization.

a. Submitter

First Name Nicole
Last Name Nelson

Title
NONE PROVIDED

Organization Name
S.C. Johnson and Son Inc.

Phone Type	Number	Extension
Business	2622602000	

Email
nmnelson@scj.com

Mailing Address

1525 HOWE ST

RACINE, WI 53403-2237

b. Additional Submitter Details

If you have an additional or co-submitter, you may add them by clicking the Add New Submitter button. You can also add an additional submitter by clicking the Duplicate Submitter button, which will create a new submitter record by copying the first submitter. Duplicate Submitter details can be updated as needed.

2. Brief description of the type of product to which PFAS is intentionally added.

2a. Product Category

Product Category Name
Cleaning product

The descriptive name of the product.
TruShot 2.0 Refill Package Vent

b. A brief narrative of the product; its physical structure; and appearance; how it functions; and if applicable, its place in larger items, systems, or processes.
We are submitting this Currently Unavoidable Use (CUU) application out of an abundance of caution, as it is not clear whether the items in question fall within the scope of Maine's PFAS regulations both because of their forms and functions as well as the fact that they may not have been intentionally formulated with PFAS.

Although these products may not have been intentionally formulated with PFAS and may not clearly fall within a regulated product category, we recognize that certain internal components within the delivery system may raise questions under the current regulatory definitions. Accordingly, we are submitting this CUU request provisionally to seek clarification and with reservation of rights to contest the characterizations under Maine's PFAS regulations.

This submission is made in good faith, with the intent to cooperate fully with the Maine Department of Environmental Protection and to support the state's efforts to reduce PFAS exposure.

Inside the valve cup located at the top of the cartridge for the following concentrated products, there is a small valve (approximately 0.014g), and a portion of the membrane—details of which are proprietary—contains Polytetrafluoroethylene (PTFE) — CAS 9002-84-0:
TruShot 2.0 Restroom Cleaner Refill
TruShot 2.0 Power Cleaner Degreaser Refill
TruShot 2.0 Multi-Surface Glass Cleaner Refill
TruShot 2.0 Restroom Disinfectant Cleaner Refill
TruShot 2.0 Hospital Disinfectant Cleaner Refill
TruShot 2.0 Multi-Surface Restroom Disinfectant Cleaner Refill
TruShot 2.0 Starter Pack

9-oz. concentrate cartridges snap directly into a trigger dispenser and the pre-labeled cartridges. The concentrated product within the cartridge is then diluted with the 10-oz. water reservoir which is connected to the trigger dispenser.

The TruShot 2.0— hard surface chemistries and this patented system simplifies dilution dispensing and replaces wall-mounted or other concentrate dispensing systems.

To find your GPC Category and code, visit https://gpc-browser.gs1.org/

c. GPC Category, if applicable.

GPC Category
NONE PROVIDED

d. GPC Code, if applicable.

GPC Code
NONE PROVIDED

e. HTS Code, if applicable.

HTS Code
3926.90.4510

f. NAICS code for sector or sectors in which the products containing intentionally added PFAS will be utilized.
561210-Facilities Support Services
561720-Janitorial Services

3. Explanation of why the availability of PFAS in this specific product is essential for health safety or the functioning of society.

Maine defines "Essential for health, safety or the functioning of society" to mean: "a use of a PFAS in a product when the function provided by the PFAS is necessary for the product to perform as intended, such that the unavailability of the PFAS for use in the product would cause the product to be unavailable, which would result in: (1) A significant increase in negative health outcomes; (2) An inability to mitigate significant risks to human health or the environment; or (3) A significant disruption of the daily functions on which society relies."

a. An explanation of why the availability of PFAS in this specific product is essential for health safety or the functioning of society.
This product ensures consistent and effective cleaning and disinfection, which helps prevent the spread of harmful pathogens in public and private spaces such as hospitals, schools, and workplaces. Their pre-measured, closed system reduces human error in dilution, enhances worker safety, and eliminates the need for bulky wall-mounted systems making sanitation more accessible and reliable across industries.

If needed, attach additional information.

NONE PROVIDED

Comment

NONE PROVIDED

4. Description of how the specific use of PFAS in the product is essential to the function of the product.

a. Please provide a description of how and why PFAS is essential to the function of the product. (This may include a description of the negative impact that would be caused by the unavailability of PFAS for use in the product and the subsequent unavailability or unsatisfactory performance of the product).
The importance of the vent is that it controls the dilution ratio of concentrated cleaners. This is essential to ensure that the products including those registered as disinfectants with the EPA are appropriately diluted to maintain their efficacy and intended use.
Controlled dilution is also critical to limit potential worker exposure to concentrated cleaners, which often carry a 'Danger' hazard classification that are governed under 29 CFR 1910.1200 - Hazard Communication Standard (HCS).

b. Please provide a description of the specific characteristic or combination of characteristics that necessitate the use of PFAS in the product
The vent is engineered with a precise airflow rate due to its narrow structure. It is also designed to withstand the chemical compatibility challenges posed by highly corrosive formulations and their associated off gassing. This allows for a delicate and finely tuned mechanical interaction. Additionally, the material is hydrophobic and oleophobic, helping to repel these aggressive substances and maintain performance integrity.

c. If this use of PFAS in the product is required by federal or state law or regulation, please provide the following.

Type	Citation
Not Applicable	*NONE PROVIDED*

5. Description of reasonably available alternatives for this specific use of PFAS.

Please provide a description of reasonably available alternatives for this specific use of PFAS. Include an evaluation of the following aspects in your description (attach supporting documentation if necessary).

a. Identification of specific compounds, classes of materials, or combinations of materials identified as potential alternatives including the removal of PFAS without substitution.
We have tested alternative non-PFAS materials, including Sefar Puretex, but they lack the necessary chemical compatibility. These alternatives also fail to deliver the precise dosing required to meet the dilution specifications of the formulations, as previously described.

b. An assessment of how the materials listed above meet or fail to meet the criteria that necessitate the use of PFAS chemicals.
With alternative membrane materials, chemical incompatibility can compromise material integrity, which in turn affects the airflow rate and overall performance of the system.
With alternative valve designs, excessively high cracking pressures lead to inconsistent dilution ratios, which negatively impact the efficacy of the formulations and potential package failure.

c. An assessment of whether materials identified above are available in sufficient quantities to meet production needs.
Sufficient materials nor a redesign are available.

d. An assessment of the anticipated cost difference between obtaining PFAS for use in the product subject to the proposal and obtaining the material identified above, for the same purpose.
Not currently available.

e. A comparison of the known risks to human health and the environment between PFAS and the alternative materials identified above.
None available

f. An assessment of whether there are feasible changes to the manufacturing process of the product that would eliminate the need for PFAS.
As mentioned above, a product redesign is being worked on.

Attach supporting documentation if necessary,

NONE PROVIDED

Comment

NONE PROVIDED

6. List of federal regulations, other State of Maine rules, and regulations of other states which the product is subject to by reason of containing intentionally added PFAS.

a. Please provide a list of federal regulations, other State of Maine rules, and regulations of other states which the product is subject to by reason of containing intentionally added PFAS.
We acknowledge that these products may also fall within the scope of Minnesota's PFAS prohibitions. However, we understand that the Minnesota Legislature has provided a temporary exemption through enforcement discretion for electronic and other internal components in this category. The state is actively evaluating how to address this regulatory complexity, and we are monitoring developments closely to ensure continued compliance.

7. List of sales prohibitions that the product is subject to because of containing intentionally added PFAS.

a. Please provide a list of sales prohibitions that the product is subject to because of containing intentionally added PFAS. If there are no sales prohibitions, please type "none" into the Product Category Name.

Product Category	Product Category Name	Prohibition Citation	Prohibition Type	Have you filed a proposal?	Proposal Status

b. If a prohibition listed above is absolute, please provide a list of comparable products that the proposer is aware of remaining available for sale, offered for sale, or distributed for sale within that specific jurisdiction.

NONE PROVIDED

c. If the prohibition cited above is absolute, please provide justification explaining how products available in compliance with that prohibition are not reasonably available alternatives for the product subject to this CUU proposal in the State of Maine.

NONE PROVIDED

d. If the prohibition cited above is absolute, please provide an explanation and supporting documentation of why those products containing PFAS alternatives listed above would not perform as intended in the State of Maine due to differing physical or climate conditions.

NONE PROVIDED

Attach additional information.

NONE PROVIDED

Comment

NONE PROVIDED

8. This section relates to information known or reasonably ascertainable by the submitter regarding the impacts on human health or the environment as a result of PFAS in the product.

a. Any information documenting impacts on human health as a result of the specific use of PFAS in the product.

PFAS are capable of causing a variety of effects including cancer, reproductive effects, immune effects, and other health outcomes. The effects depend on the duration, the route of exposure and the dose which is expected to be minimal in this product as the contact to human is indirect.

1. PMID: 33017053

b. Provide a description of the likely pathways of human exposure for the specific use of PFAS in the product.

The concentrated formula in this product could contact the breathable membrane during product use resulting in a minimal dermal exposure to consumers. Professional users are however expected to use gloves during cleaning which further limits any potential exposure.

c. Provide any information documenting environmental impacts because of the specific use of PFAS in the product.

Toxicological studies(1) indicated that PTFE meets the criteria suggested by OECD for polymer of low concerns (PLCs). PLCs have insignificant environmental impacts. PTFE has a higher molecular weight and are less likely to pose a hazard than lower molecular weight polymers. It is stable in the environment, not soluble in water and not subject to long-range transport. It is not bioavailable or bio accumulative. It has low molecular weight leachables. Due to their property and low concerns, there is currently no suitable alternatives(2).

1. https://pubmed.ncbi.nlm.nih.gov/29424474/
2. https://product.enhesa.com/826977 (login required)

d. Provide a description of any likely pathways for environmental release of PFAS because of the specific use of PFAS in the product.

No pathways for direct environmental releases are anticipated from the use of this product. End-of-life disposal to landfill are the main source of environmental exposure.

If needed, attach additional information.

NONE PROVIDED

Comment

NONE PROVIDED

9. This section relates to the product's fate at the end of its lifecycle.

a. Describe the product's fate at the end of its lifecycle, including any product stewardship programs or other government imposed processes.

Empty containers are disposed of as general waste ending up in landfills

Additional Supportive Attachments

NONE PROVIDED

Comment

NONE PROVIDED

b. How is the product intended to be disposed of, such as landfilling or via a sewage or septage system?
Landfill

c. The recycling rate of the product.
0

10. This section relates to Confidential Business Information.

1. Please list the section (number) and question (letter) of submission information which contains confidential business information.

Section Number	Question Letter
NONE PROVIDED	*NONE PROVIDED*

Status History

	User	Processing Status
6/25/2025 1:53:51 PM	Nicole Nelson	Draft
6/25/2025 1:55:16 PM	Nicole Nelson	Submitted
6/25/2025 1:55:22 PM	Nicole Nelson	In Process

Revisions

Revision	Revision Date	Revision By
Revision 1	5/30/2025 12:55 PM	Leah Sober
Revision 2	6/25/2025 1:53 PM	Nicole Nelson

PFAS - Currently Unavoidable Use Proposal

version 1.2

(Submission #: HQC-ZR7R-6N0MY, version 1)

Details

Submission ID HQC-ZR7R-6N0MY

Status In Process

Form Input

1. Submitter Information. (1 of 2)

Instructions

Provide the contact information for your organization.

a. Submitter

First Name	Last Name
Leah	Sober

Title

NONE PROVIDED

Organization Name

S.C. Johnson and Son Inc.

Phone Type	Number	Extension
Business	2622602000	3546

Email

lmsober@scj.com

Mailing Address

1525 HOWE ST

RACINE, WI 53403-2237

b. Additional Submitter Details

If you have an additional or co-submitter, you may add them by clicking the Add New Submitter button. You can also add an additional submitter by clicking the Duplicate Submitter button, which will create a new submitter record by copying the first submitter. Duplicate Submitter details can be updated as needed.

1. Submitter Information. (2 of 2)

Instructions

Provide the contact information for your organization.

a. Submitter

First Name	Last Name
Nicole	Nelson

Title
NONE PROVIDED

Organization Name
S.C. Johnson and Son Inc.

Phone Type	Number	Extension
Business	2622602000	

Email
nmnelson@scj.com

Mailing Address

1525 HOWE ST

RACINE, WI 53403-2237

b. Additional Submitter Details

If you have an additional or co-submitter, you may add them by clicking the Add New Submitter button. You can also add an additional submitter by clicking the Duplicate Submitter button, which will create a new submitter record by copying the first submitter. Duplicate Submitter details can be updated as needed.

2. Brief description of the type of product to which PFAS is intentionally added.

2a. Product Category

Product Category Name
Cleaning product

The descriptive name of the product.
Wax Melts Electric Warmer Device

b. A brief narrative of the product; its physical structure; and appearance; how it functions; and if applicable, its place in larger items, systems, or processes.
We are submitting this Currently Unavoidable Use (CUU) application out of an abundance of caution, as it is not clear whether the items in question fall within the scope of Maine's PFAS regulations both because of their forms and functions as well as the fact that they may not have been intentionally formulated with PFAS.

Although these products may not have been intentionally formulated with PFAS and may not clearly fall within a regulated product category, we recognize that certain internal components within the delivery system may raise questions under the current regulatory definitions. Accordingly, we are submitting this CUU request provisionally to seek clarification and with reservation of rights to contest the characterizations under Maine's PFAS regulations.

This submission is made in good faith, with the intent to cooperate fully with the Maine Department of Environmental Protection and to support the state's efforts to reduce PFAS exposure.

Glade® Wax Melts Electric Warmer Device is an electric fragrance warmer that gently heats scented wax cubes to release fragrance into the air. It plugs into a wall outlet and uses a warming plate instead of an open flame, making it a flameless alternative to candles. As the wax melts, it fills the room with a continuous, pleasant scent. The wax is replaceable and comes in a variety of fragrances to suit different moods and seasons.

There are two tubes within the Resistor Assembly which contain some amount of Polytetrafluoroethylene (PTFE) • CAS 9002-84-0. The total amount of PTFE in the total device amounts to 0.023%. There is not direct consumer exposure to the material because it is contained within the device.

To find your GPC Category and code, visit https://gpc-browser.gs1.org/

c. GPC Category, if applicable.

GPC Category
NONE PROVIDED

d. GPC Code, if applicable.

GPC Code
NONE PROVIDED

e. HTS Code, if applicable.

HTS Code
8516.79.0000

f. NAICS code for sector or sectors in which the products containing intentionally added PFAS will be utilized.
445110-Supermarkets and Other Grocery (except Convenience) Stores
455211-Warehouse Clubs And Supercenters
455210-Warehouse Clubs, Supercenters, And Other General Merchandise Retailers

3. Explanation of why the availability of PFAS in this specific product is essential for health safety or the functioning of society.

Maine defines "Essential for health, safety or the functioning of society" to mean: "a use of a PFAS in a product when the function provided by the PFAS is necessary for the product to perform as intended, such that the unavailability of the PFAS for use in the product would cause the product to be unavailable, which would result in: (1) A significant increase in negative health outcomes; (2) An inability to mitigate significant risks to human health or the environment; or (3) A significant disruption of the daily functions on which society relies."

a. An explanation of why the availability of PFAS in this specific product is essential for health safety or the functioning of society.
PTFE-containing tubes within the resistor assembly play a vital role in ensuring electrical and thermal safety. They provide a durable, flame-retardant barrier around conductive elements, protecting against high temperatures, humidity, and mechanical stress—such as repeated flexing or movement during device operation. This resilience helps prevent insulation failure, reducing the risk of short circuits, overheating, or fire. PTFE's chemical stability and resistance to degradation make it an ideal material for maintaining long-term safety and reliability in household heating and control systems.

If needed, attach additional information.
NONE PROVIDED
Comment
NONE PROVIDED

4. Description of how the specific use of PFAS in the product is essential to the function of the product.

a. Please provide a description of how and why PFAS is essential to the function of the product. (This may include a description of the negative impact that would be caused by the unavailability of PFAS for use in the product and the subsequent unavailability or unsatisfactory performance of the product).
PTFE-containing tubes within the resistor assembly serves as a critical protective barrier, helping to prevent human contact with live electrical parts and reducing the risk of electric shock. Its durability also helps ensure that the wiring resists fatigue-related wear over time, supporting the product's safe operation throughout its intended lifespan and warranty period.

b. Please provide a description of the specific characteristic or combination of characteristics that necessitate the use of PFAS in the product
PTFE is uniquely suited for critical electrical and thermal applications due to their exceptional combination of flame resistance, chemical inertness, thermal stability, and mechanical durability. These properties make them indispensable for ensuring long-term safety, insulation integrity, and reliability in environments exposed to heat, electrical stress, and physical movement.

c. If this use of PFAS in the product is required by federal or state law or regulation, please provide the following.

Type	Citation
Not Applicable	*NONE PROVIDED*

5. Description of reasonably available alternatives for this specific use of PFAS.

Please provide a description of reasonably available alternatives for this specific use of PFAS. Include an evaluation of the following aspects in your description (attach supporting documentation if necessary).

a. Identification of specific compounds, classes of materials, or combinations of materials identified as potential alternatives including the removal of PFAS without substitution.
"While alternative materials like silicone may offer some similar benefits—such as flexibility and heat resistance—they typically do not match PTFE's full performance profile, particularly in terms of chemical resistance and long-term endurance. As such, replacing PTFE would require extensive requalification of the product.

This requalification would involve comprehensive testing and re-certification, including but not limited to:

Mechanical endurance testing (e.g., flexing, fatigue, and abrasion resistance)
Impact and drop testing (to simulate real-world handling and stress)
Thermal testing (exposure to high and low temperatures, thermal cycling)
Overvoltage and surge testing (to ensure electrical safety under fault conditions)
Chemical compatibility testing (to assess resistance to oils, solvents, and cleaning agents)
Flammability and insulation testing (to meet safety standards)
Additionally, any material change would require re-certification under applicable UL standards

This includes:

Performance testing (e.g., dielectric strength, thermal aging)
Durability testing (e.g., fatigue resistance, environmental cycling)
Safety testing (e.g., flame retardancy, insulation integrity)
UL re-certification under standards"

b. An assessment of how the materials listed above meet or fail to meet the criteria that necessitate the use of PFAS chemicals.
See above summary.

c. An assessment of whether materials identified above are available in sufficient quantities to meet production needs.
Yes, the materials such as silicone are available in sufficient quantities to meet production needs. However, transitioning to alternative materials like silicone would require time for qualification. This includes extensive performance, safety, and durability testing, as well as re-certification under industry standards such as UL 758 and UL 94. While not mandated by federal or state law, UL certification is widely adopted across the industry to demonstrate compliance with Consumer Product Safety Commission (CPSC) expectations and to ensure product safety and market acceptance.

d. An assessment of the anticipated cost difference between obtaining PFAS for use in the product subject to the proposal and obtaining the material identified above, for the same purpose.
Not currently available.

e. A comparison of the known risks to human health and the environment between PFAS and the alternative materials identified above.
Not available.

f. An assessment of whether there are feasible changes to the manufacturing process of the product that would eliminate the need for PFAS.
The reason for the material is for device durability and performance, not manufacturing.

Attach supporting documentation if necessary,

NONE PROVIDED

Comment

NONE PROVIDED

6. List of federal regulations, other State of Maine rules, and regulations of other states which the product is subject to by reason of containing intentionally added PFAS.

a. Please provide a list of federal regulations, other State of Maine rules, and regulations of other states which the product is subject to by reason of containing intentionally added PFAS.

We acknowledge that these products may also fall within the scope of Minnesota's PFAS prohibitions. However, we understand that the Minnesota Legislature has provided a temporary exemption through enforcement discretion for electronic and other internal components in this category. The state is actively evaluating how to address this regulatory complexity, and we are monitoring developments closely to ensure continued compliance.

7. List of sales prohibitions that the product is subject to because of containing intentionally added PFAS.

a. Please provide a list of sales prohibitions that the product is subject to because of containing intentionally added PFAS. If there are no sales prohibitions, please type "none" into the Product Category Name.

Product Category	Product Category Name	Prohibition Citation	Prohibition Type	Have you filed a proposal?	Proposal Status

b. If a prohibition listed above is absolute, please provide a list of comparable products that the proposer is aware of remaining available for sale, offered for sale, or distributed for sale within that specific jurisdiction.

NONE PROVIDED

c. If the prohibition cited above is absolute, please provide justification explaining how products available in compliance with that prohibition are not reasonably available alternatives for the product subject to this CUU proposal in the State of Maine.

NONE PROVIDED

d. If the prohibition cited above is absolute, please provide an explanation and supporting documentation of why those products containing PFAS alternatives listed above would not perform as intended in the State of Maine due to differing physical or climate conditions.

NONE PROVIDED

Attach additional information.

NONE PROVIDED

Comment

NONE PROVIDED

8. This section relates to information known or reasonably ascertainable by the submitter regarding the impacts on human health or the environment as a result of PFAS in the product.

a. Any information documenting impacts on human health as a result of the specific use of PFAS in the product.

PFAS are capable of causing a variety of effects including cancer, reproductive effects, immune effects, and other health outcomes, however, the effects depends on the dose, duration and the route of exposure. In this product, exposure to PFAS is not expected thus the health risk is minimal.

1. PMID: 33017053

b. Provide a description of the likely pathways of human exposure for the specific use of PFAS in the product.

Direct exposure to humans in this product is not expected as the PTFE is a coating around the heating element inside of the device housing.

c. Provide any information documenting environmental impacts because of the specific use of PFAS in the product.

Toxicological studies1 indicated that PTFE meets the criteria suggested by OECD for polymer of low concerns (PLCs). PLCs have insignificant environmental impacts. PTFE has a higher molecular weight and are less likely to pose a hazard than lower molecular weight polymers. It is stable in the environment, not soluble in water and not subject to long-range transport. It is not bioavailable or bio accumulative. It has low molecular weight leachables. Due to their property and low concerns, there is currently no suitable alternatives2.

1. https://pubmed.ncbi.nlm.nih.gov/29424474/
2. https://product.enhesa.com/826977 (login required)

d. Provide a description of any likely pathways for environmental release of PFAS because of the specific use of PFAS in the product.
No pathways for direct environmental releases are anticipated from the use of this product.

If needed, attach additional information.

NONE PROVIDED
Comment
NONE PROVIDED

9. This section relates to the product's fate at the end of its lifecycle.

a. Describe the product's fate at the end of its lifecycle, including any product stewardship programs or other government imposed processes.
The Wax Melt warmer can be used indefinitely with new wax cubes.
The device should be disposed of as electronic waste once it no longer functions. Because it contains electrical components, it's best to take it to an electronics recycling center or a household hazardous waste facility. However, if these options aren't accessible, some of these devices may unfortunately end up in landfills.

Additional Supportive Attachments

NONE PROVIDED
Comment
NONE PROVIDED

b. How is the product intended to be disposed of, such as landfilling or via a sewage or septage system?
Landfill
Other: Electronic waste

c. The recycling rate of the product.
0

10. This section relates to Confidential Business Information.

1. Please list the section (number) and question (letter) of submission information which contains confidential business information.

Section Number	Question Letter
NONE PROVIDED	*NONE PROVIDED*

Status History

	User	Processing Status
5/30/2025 5:35:47 PM	Leah Sober	Draft
5/30/2025 5:44:58 PM	Leah Sober	Submitted
5/30/2025 5:45:02 PM	Leah Sober	In Process

PFAS - Currently Unavoidable Use Proposal

version 1.2

(Submission #: HQC-ZQJK-QWWN2, version 1)

Details

Submission ID HQC-ZQJK-QWWN2

Status In Process

Form Input

1. Submitter Information. (1 of 2)

Instructions

Provide the contact information for your organization.

a. Submitter

First Name	Last Name
Leah	Sober

Title

NONE PROVIDED

Organization Name

S.C. Johnson and Son Inc.

Phone Type	Number	Extension
Business	2622602000	3546

Email

lmsober@scj.com

Mailing Address

1525 HOWE ST

RACINE, WI 53403-2237

b. Additional Submitter Details

If you have an additional or co-submitter, you may add them by clicking the Add New Submitter button. You can also add an additional submitter by clicking the Duplicate Submitter button, which will create a new submitter record by copying the first submitter. Duplicate Submitter details can be updated as needed.

1. Submitter Information. (2 of 2)

Instructions

Provide the contact information for your organization.

a. Submitter

First Name Nicole
Last Name Nelson

Title
NONE PROVIDED

Organization Name
S.C. Johnson and Son Inc.

Phone Type	Number	Extension
Business	2622602000	

Email
nmnelson@scj.com

Mailing Address

1525 HOWE ST

RACINE, WI 53403-2237

b. Additional Submitter Details

If you have an additional or co-submitter, you may add them by clicking the Add New Submitter button. You can also add an additional submitter by clicking the Duplicate Submitter button, which will create a new submitter record by copying the first submitter. Duplicate Submitter details can be updated as needed.

2. Brief description of the type of product to which PFAS is intentionally added.

2a. Product Category

Product Category Name
Cleaning product

The descriptive name of the product.
Scented Oil Devices

b. A brief narrative of the product; its physical structure; and appearance; how it functions; and if applicable, its place in larger items, systems, or processes.
We are submitting this Currently Unavoidable Use (CUU) application out of an abundance of caution, as it is not clear whether the items in question fall within the scope of Maine's PFAS regulations both because of their forms and functions as well as the fact that they may not have been intentionally formulated with PFAS.

Although these products may not have been intentionally formulated with PFAS and may not clearly fall within a regulated product category, we recognize that certain internal components within the delivery system may raise questions under the current regulatory definitions. Accordingly, we are submitting this CUU request provisionally to seek clarification and with reservation of rights to contest the characterizations under Maine's PFAS regulations.

This submission is made in good faith, with the intent to cooperate fully with the Maine Department of Environmental Protection and to support the state's efforts to reduce PFAS exposure.

The device in the following products:
Glade® PlugIns® Scented Oil PLUS Warmer Device
Glade® PlugIns® Scented Oil Warmer Device
Glade® Scentflow Warmer Device
Mrs. Meyer's Clean Day® Premium Scented Oil Diffuser Device

These devices are electric air fresheners that plug into a wall outlet and slowly releases fragrance from a small oil-filled refill. As the device warms the oil, it disperses a continuous scent into the room. It's refillable, adjustable for scent strength, and comes in a variety of fragrances to help freshen the air and create a pleasant atmosphere in your home.

There is a coated wire within plug deck that contains some amount of Polytetrafluoroethylene (PTFE) • CAS 9002-84-0. The total amount of PTFE in the total device amounts to 0.010%. There is no direct consumer exposure to the material because it is contained within the device.

To find your GPC Category and code, visit https://gpc-browser.gs1.org/

c. GPC Category, if applicable.

GPC Category
NONE PROVIDED

d. GPC Code, if applicable.

GPC Code
NONE PROVIDED

e. HTS Code, if applicable.

HTS Code
8516.79.0000

f. NAICS code for sector or sectors in which the products containing intentionally added PFAS will be utilized.
445110-Supermarkets and Other Grocery (except Convenience) Stores
455211-Warehouse Clubs And Supercenters
455210-Warehouse Clubs, Supercenters, And Other General Merchandise Retailers

3. Explanation of why the availability of PFAS in this specific product is essential for health safety or the functioning of society.

Maine defines "Essential for health, safety or the functioning of society" to mean: "a use of a PFAS in a product when the function provided by the PFAS is necessary for the product to perform as intended, such that the unavailability of the PFAS for use in the product would cause the product to be unavailable, which would result in: (1) A significant increase in negative health outcomes; (2) An inability to mitigate significant risks to human health or the environment; or (3) A significant disruption of the daily functions on which society relies."

a. An explanation of why the availability of PFAS in this specific product is essential for health safety or the functioning of society.
The PTFE within wiring jackets plays a critical role in electrical safety by providing a robust, flame-retardant barrier around stranded copper conductors. Its exceptional resistance to heat, cold, humidity, and mechanical stress—such as repeated bending from plug decks or control knobs—helps prevent insulation failure that could lead to short circuits or fires. Because PTFE is chemically stable and slow to degrade, it ensures long-term reliability and protection in household electronics, making it a key material for maintaining safe and consistent device performance.

If needed, attach additional information.
NONE PROVIDED
Comment
NONE PROVIDED

4. Description of how the specific use of PFAS in the product is essential to the function of the product.

a. Please provide a description of how and why PFAS is essential to the function of the product. (This may include a description of the negative impact that would be caused by the unavailability of PFAS for use in the product and the subsequent unavailability or unsatisfactory performance of the product).
The inclusion of PTFE in portions of the wire jacket serves as a critical protective barrier, helping to prevent human contact with live electrical parts and reducing the risk of electric shock. Its durability also helps ensure that the wiring resists fatigue-related wear over time, supporting the product's safe operation throughout its intended lifespan and warranty period.

b. Please provide a description of the specific characteristic or combination of characteristics that necessitate the use of PFAS in the product
PTFE is uniquely suited for critical electrical and thermal applications due to their exceptional combination of flame resistance, chemical inertness, thermal stability, and mechanical durability. These properties make them indispensable for ensuring long-term safety, insulation integrity, and reliability in environments exposed to heat, electrical stress, and physical movement.

c. If this use of PFAS in the product is required by federal or state law or regulation, please provide the following.

Type	Citation

5. Description of reasonably available alternatives for this specific use of PFAS.

Please provide a description of reasonably available alternatives for this specific use of PFAS. Include an evaluation of the following aspects in your description (attach supporting documentation if necessary).

a. Identification of specific compounds, classes of materials, or combinations of materials identified as potential alternatives including the removal of PFAS without substitution.
While alternative materials like silicone may offer some similar benefits—such as flexibility and heat resistance—they typically do not match PTFE's full performance profile, particularly in terms of chemical resistance and long-term endurance. As such, replacing PTFE would require extensive requalification of the product.

This requalification would involve comprehensive testing and re-certification, including but not limited to:

Mechanical endurance testing (e.g., flexing, fatigue, and abrasion resistance)
Impact and drop testing (to simulate real-world handling and stress)
Thermal testing (exposure to high and low temperatures, thermal cycling)
Overvoltage and surge testing (to ensure electrical safety under fault conditions)
Chemical compatibility testing (to assess resistance to oils, solvents, and cleaning agents)
Flammability and insulation testing (to meet safety standards)
Additionally, any material change would require re-certification under applicable UL standards

This includes:

Performance testing (e.g., dielectric strength, thermal aging)
Durability testing (e.g., fatigue resistance, environmental cycling)
Safety testing (e.g., flame retardancy, insulation integrity)
UL re-certification under standards

b. An assessment of how the materials listed above meet or fail to meet the criteria that necessitate the use of PFAS chemicals.
See above summary.

c. An assessment of whether materials identified above are available in sufficient quantities to meet production needs.
Yes, the materials such as silicone are available in sufficient quantities to meet production needs. However, transitioning to alternative materials like silicone would require time for qualification. This includes extensive performance, safety, and durability testing, as well as re-certification under industry standards such as UL 758 and UL 94. While not mandated by federal or state law, UL certification is widely adopted across the industry to demonstrate compliance with Consumer Product Safety Commission (CPSC) expectations and to ensure product safety and market acceptance.

d. An assessment of the anticipated cost difference between obtaining PFAS for use in the product subject to the proposal and obtaining the material identified above, for the same purpose.
Not currently available.

e. A comparison of the known risks to human health and the environment between PFAS and the alternative materials identified above.
Not available.

f. An assessment of whether there are feasible changes to the manufacturing process of the product that would eliminate the need for PFAS.
The reason for the material is for device durability and performance, not manufacturing.

Attach supporting documentation if necessary,

NONE PROVIDED

Comment

NONE PROVIDED

6. List of federal regulations, other State of Maine rules, and regulations of other states which the product is subject to by reason of containing intentionally added PFAS.

a. Please provide a list of federal regulations, other State of Maine rules, and regulations of other states which the product is subject to by reason of containing intentionally added PFAS.
We acknowledge that these products may also fall within the scope of Minnesota's PFAS prohibitions. However, we understand that the Minnesota Legislature has provided a temporary exemption through enforcement discretion for electronic and other internal components in this category. The state is actively evaluating how to address this regulatory complexity, and we are monitoring developments closely to ensure continued compliance.

7. List of sales prohibitions that the product is subject to because of containing intentionally added PFAS.

a. Please provide a list of sales prohibitions that the product is subject to because of containing intentionally added PFAS. If there are no sales prohibitions, please type "none" into the Product Category Name.

Product Category	Product Category Name	Prohibition Citation	Prohibition Type	Have you filed a proposal?	Proposal Status

b. If a prohibition listed above is absolute, please provide a list of comparable products that the proposer is aware of remaining available for sale, offered for sale, or distributed for sale within that specific jurisdiction.

NONE PROVIDED

c. If the prohibition cited above is absolute, please provide justification explaining how products available in compliance with that prohibition are not reasonably available alternatives for the product subject to this CUU proposal in the State of Maine.

NONE PROVIDED

d. If the prohibition cited above is absolute, please provide an explanation and supporting documentation of why those products containing PFAS alternatives listed above would not perform as intended in the State of Maine due to differing physical or climate conditions.

NONE PROVIDED

Attach additional information.

NONE PROVIDED

Comment

NONE PROVIDED

8. This section relates to information known or reasonably ascertainable by the submitter regarding the impacts on human health or the environment as a result of PFAS in the product.

a. Any information documenting impacts on human health as a result of the specific use of PFAS in the product.

"PFAS are capable of causing a variety of effects including cancer, reproductive effects, immune effects, and other health outcomes, however, the effects depends on the dose, duration and the route of exposure. In this product, exposure to PFAS is not expected thus the health risk is minimal.
1. PMID: 33017053"

b. Provide a description of the likely pathways of human exposure for the specific use of PFAS in the product.

Direct exposure to humans in this product is not expected as the PTFE is a coating around the heating element inside of the device housing.

c. Provide any information documenting environmental impacts because of the specific use of PFAS in the product.

"Toxicological studies1 indicated that PTFE meets the criteria suggested by OECD for polymer of low concerns (PLCs). PLCs have insignificant environmental impacts. PTFE has a higher molecular weight and are less likely to pose a hazard than lower molecular weight polymers. It is stable in the environment, not soluble in water and not subject to long-range transport. It is not bioavailable or bio accumulative. It has low molecular weight leachables. Due to their property and low concerns, there is currently no suitable alternatives2.

1. https://pubmed.ncbi.nlm.nih.gov/29424474/
2. https://product.enhesa.com/826977 (login required)"

d. Provide a description of any likely pathways for environmental release of PFAS because of the specific use of PFAS in the product.

No pathways for direct environmental releases are anticipated from the use of this product.

If needed, attach additional information.

NONE PROVIDED

Comment

NONE PROVIDED

9. This section relates to the product's fate at the end of its lifecycle.

a. Describe the product's fate at the end of its lifecycle, including any product stewardship programs or other government imposed processes.

The Plug-in device is designed to be used repeatedly with new scented oil refills.
Additionally, these are considered small electronic appliances therefore the device should be disposed of as electronic waste when it no longer works. Because it contains electrical components, it's best to take it to an electronics recycling center or a household hazardous waste facility for proper handling. However, in areas without convenient recycling options, some of these devices may end up in landfills, contributing to electronic waste.

Additional Supportive Attachments

NONE PROVIDED

Comment

NONE PROVIDED

b. How is the product intended to be disposed of, such as landfilling or via a sewage or septage system?

Other: Electronic waste
Landfill

c. The recycling rate of the product.

0

10. This section relates to Confidential Business Information.

1. Please list the section (number) and question (letter) of submission information which contains confidential business information.

Section Number	Question Letter
NONE PROVIDED	*NONE PROVIDED*

Status History

	User	Processing Status
5/30/2025 4:57:58 PM	Leah Sober	Draft
5/30/2025 5:27:45 PM	Leah Sober	Submitted
5/30/2025 5:27:52 PM	Leah Sober	In Process

PFAS - Currently Unavoidable Use Proposal

version 1.2

(Submission #: HQC-J9ZH-K4EZJ, version 5)

Details

Submission ID	HQC-J9ZH-K4EZJ
Status	In Process

Form Input

1. Submitter Information. (1 of 2)

Instructions

Provide the contact information for your organization.

a. Submitter

First Name	Last Name
Justin	DeYoung

Title
SHERPS Manager, The Americas

Organization Name
Selig Group

Phone Type	Number	Extension
Business	8157852100	174

Email
jdeyoung@seliggroup.com

Mailing Address

5569 33RD ST SE

GRAND RAPIDS, MI 49512-2061

b. Additional Submitter Details

If you have an additional or co-submitter, you may add them by clicking the Add New Submitter button. You can also add an additional submitter by clicking the Duplicate Submitter button, which will create a new submitter record by copying the first submitter. Duplicate Submitter details can be updated as needed.

1. Submitter Information. (2 of 2)

Instructions

Provide the contact information for your organization.

a. Submitter

First Name	Last Name
Justin	DeYoung

Title
NONE PROVIDED

Organization Name
Selig Group

Phone Type	Number	Extension
Business	8157852100	174

Email
jdeyoung@seliggroup.com

Mailing Address

5569 33RD ST SE

GRAND RAPIDS, MI 49512-2061

b. Additional Submitter Details

If you have an additional or co-submitter, you may add them by clicking the Add New Submitter button. You can also add an additional submitter by clicking the Duplicate Submitter button, which will create a new submitter record by copying the first submitter. Duplicate Submitter details can be updated as needed.

2. Brief description of the type of product to which PFAS is intentionally added.

2a. Product Category

Product Category Name
Cleaning product

The descriptive name of the product.
Vented Capliners of foam and induction foils

b. A brief narrative of the product; its physical structure; and appearance; how it functions; and if applicable, its place in larger items, systems, or processes.
Capliners are multi-layered laminated/extruded structures consisting of various substrates like foil, films, resins, adhesive layers, etc. providing a tamper evident or clean peel bond to the container being packaged. These capliners provide extended shelf life, moisture/oxygen barriers, leak prevention, venting, etc. PTFE (considered a PFAs by definition now) vents are used in our capliner products produced for various industries. The vents are applied to our finished capliner products by our Grand Rapids, MI location.

The cleaning product these vents are used on is Bleach. Bleach off gases and causes the container to expand. Without these vents, the package will more or less burst.

Haircare products (cosmetic) may also use our vented liners. These products also off gas as well, creating the same scenario as bleach and the packaging having the potential to burst.

Liquid Ag Chemical also use our vented liners.

To find your GPC Category and code, visit https://gpc-browser.gs1.org/

c. GPC Category, if applicable.

GPC Category
NONE PROVIDED

d. GPC Code, if applicable.

GPC Code
NONE PROVIDED

e. HTS Code, if applicable.

HTS Code
3921.19.0000
7607.20.5000
3923.50.0000

f. NAICS code for sector or sectors in which the products containing intentionally added PFAS will be utilized.
322299-All Other Converted Paper Product Manufacturing

3. Explanation of why the availability of PFAS in this specific product is essential for health safety or the functioning of society.

Maine defines "Essential for health, safety or the functioning of society" to mean: "a use of a PFAS in a product when the function provided by the PFAS is necessary for the product to perform as intended, such that the unavailability of the PFAS for use in the product would cause the product to be unavailable, which would result in: (1) A significant increase in negative health outcomes; (2) An inability to mitigate significant risks to human health or the environment; or (3) A significant disruption of the daily functions on which society relies."

a. An explanation of why the availability of PFAS in this specific product is essential for health safety or the functioning of society.
The introduction of the use of expanded polytetrafluoroethylene (ePTFE) into packages has allowed for significant advances in safe and effective packaging across multiple industries – Food, Life Sciences, Personal Care, Agrochemicals, Cleaning & Sanitation. The advancements of ePTFE to provide safe and effective packages has supported industry efforts to increase the efficacy of products, increase the concentration of active ingredients (to reduce transportation waste), and to reduce the weight and the complexity of plastic containers. PTFE in itself is a relatively inert compound and is widely used in the pharmaceutical/medical industries.

If needed, attach additional information.

NONE PROVIDED

Comment

NONE PROVIDED

4. Description of how the specific use of PFAS in the product is essential to the function of the product.

a. Please provide a description of how and why PFAS is essential to the function of the product. (This may include a description of the negative impact that would be caused by the unavailability of PFAS for use in the product and the subsequent unavailability or unsatisfactory performance of the product).
The specific characteristics of ePTFE are unmatched by any alternates available today. Removing ePTFE as a functional component to packaging will eliminate the benefits ePTFE provides – lighter weight packages, higher concentration of active ingredients, more effective products, and the use of less complicated packaging. The relative % of ePTFE to the overall disc (capliner) is typically less than 1%. ePTFE is the perfect venting material as it is a one size fits all solution suitable for use in a lot of different applications such as oleophobic/hydrophobic applications. There are no current suitable replacement materials on the market that will meet all of the various different applications that need vented material solutions.

b. Please provide a description of the specific characteristic or combination of characteristics that necessitate the use of PFAS in the product
Removing ePTFE as a functional component to packaging will eliminate the benefits ePTFE provides – lighter weight packages, higher concentration of active ingredients, more effective products, and the use of less complicated packaging.

c. If this use of PFAS in the product is required by federal or state law or regulation, please provide the following.

Type	Citation
Not Applicable	*NONE PROVIDED*

5. Description of reasonably available alternatives for this specific use of PFAS.

Please provide a description of reasonably available alternatives for this specific use of PFAS. Include an evaluation of the following aspects in your description (attach supporting documentation if necessary).

a. Identification of specific compounds, classes of materials, or combinations of materials identified as potential alternatives including the removal of PFAS without substitution.
There are no reasonably available alternatives to ePTFE on the market. All solutions are currently being worked on internally by Research and Development and Selig's work with university's. This is an incredibly difficult solution to develop from scratch.

Alternatives assessed, but with minimal success are expanded polypropylene membranes, cellulose acetate membranes, polyester polyethersulfone membranes, Polyethylene, and Polyolefin membranes

b. An assessment of how the materials listed above meet or fail to meet the criteria that necessitate the use of PFAS chemicals.
All of the materials exhibit either extremely slow air flow or lack the required hydrobic specifications. In most cases the alternative vented materials can break down due to some of the products being package with it like chemicals, etc. ePTFE is the perfect solution because it is inert and does not react with the products being packaged in the same ways the failed solutions do.

c. An assessment of whether materials identified above are available in sufficient quantities to meet production needs.
Alternative materials are still in development so they are not available in the quantities that would be needed. This is purely a from scratch project that industry in general has not developed a solution for yet.

d. An assessment of the anticipated cost difference between obtaining PFAS for use in the product subject to the proposal and obtaining the material identified above, for the same purpose.
The anticipated cost differences for alternatives (that are not commercially available or fully developed yet) vs. the current ePTFE solution is calculated at roughly 10 times the current costs.

e. A comparison of the known risks to human health and the environment between PFAS and the alternative materials identified above.
ePTFE is a relatively inert compound that has been approved in food use contact and in the medical industries for many decades. It is on many approved migration/extraction approved chemicals lists globally for food contact use materials.

PTFE:
PTFE is a synthetic fluoropolymer, a high-molecular-weight chain composed of repeating tetrafluoroethylene units. It is known for its inertness, resistance to chemicals and heat, and non-stick properties. Due to its size, PTFE is generally considered to be less bioavailable and mobile in the environment compared to smaller PFAS molecules.

Biodegradability: PTFE is highly stable and does not readily degrade in the environment. PFOS, on the other hand, is persistent and can remain in the environment for extended periods.

Bioavailability: Due to its size, PTFE is less likely to be absorbed into the body compared to PFOS.

Environmental Concerns:
While both PTFE and PFOS are PFAS, the focus of environmental and health concerns is often on smaller, more bioavailable PFAS like PFOS, rather than PTFE.

f. An assessment of whether there are feasible changes to the manufacturing process of the product that would eliminate the need for PFAS.
Process would be unchanged, we just do not have available raw materials or solutions.

Attach supporting documentation if necessary,

NONE PROVIDED

Comment

NONE PROVIDED

6. List of federal regulations, other State of Maine rules, and regulations of other states which the product is subject to by reason of containing intentionally added PFAS.

a. Please provide a list of federal regulations, other State of Maine rules, and regulations of other states which the product is subject to by reason of containing intentionally added PFAS.
30 states have adopted 155 policies
35 states have introduced 208 policies

https://www.saferstates.org/bill-tracker/?states=All&toxic_chemicals=PFAS

This is constantly evolving at a state level and internationally.

7. List of sales prohibitions that the product is subject to because of containing intentionally added PFAS.

a. Please provide a list of sales prohibitions that the product is subject to because of containing intentionally added PFAS. If there are no sales prohibitions, please type "none" into the Product Category Name.

Product Category	Product Category Name	Prohibition Citation	Prohibition Type	Have you filed a proposal?	Proposal Status
Other: Vented Closures for Packaging	Packaging	*NONE PROVIDED*	Absolute		
Cleaning product	Packaging	*NONE PROVIDED*	Absolute		
Cosmetic product	Packaging	*NONE PROVIDED*	Absolute		
Products listed that do not contain intentionally added PFAS but are offered for sale, or distributed for sale in a fluorinated container or in a container that otherwise contains intentionally added PFAS	Packaging	*NONE PROVIDED*	Absolute		

b. If a prohibition listed above is absolute, please provide a list of comparable products that the proposer is aware of remaining available for sale, offered for sale, or distributed for sale within that specific jurisdiction.
There is no alternative available. There is no known vent material that does not consist of PTFE. Alternative material has been tested but do not meet the demands of the products that are contained within the vented containers. (Bleach, Soaps, Ag Chem. etc.)

c. If the prohibition cited above is absolute, please provide justification explaining how products available in compliance with that prohibition are not reasonably available alternatives for the product subject to this CUU proposal in the State of Maine.
The PTFE is inert; the alternative membranes are either hydrophilic and must be treated to become hydrophobic or are hydrophobic but will become attacked by the products it is intended to provide venting for. In most cases hydrophobic coatings will contain some level of PFAS.

d. If the prohibition cited above is absolute, please provide an explanation and supporting documentation of why those products containing PFAS alternatives listed above would not perform as intended in the State of Maine due to differing physical or climate conditions.
The PTFE is inert; the alternative membranes are either hydrophilic and must be treated to become hydrophobic or are hydrophobic but will become attacked by the products it is intended to provide venting for. In most cases hydrophobic coatings will contain some level of PFAS.

Attach additional information.

NONE PROVIDED

Comment

Alternative developments done by Selig and Virgina Tech has failed when challenged by various products typicall

8. This section relates to information known or reasonably ascertainable by the submitter regarding the impacts on human health or the environment as a result of PFAS in the product.

a. Any information documenting impacts on human health as a result of the specific use of PFAS in the product.

NONE PROVIDED

b. Provide a description of the likely pathways of human exposure for the specific use of PFAS in the product.

NONE PROVIDED

c. Provide any information documenting environmental impacts because of the specific use of PFAS in the product.

NONE PROVIDED

d. Provide a description of any likely pathways for environmental release of PFAS because of the specific use of PFAS in the product.

NONE PROVIDED

If needed, attach additional information.

NONE PROVIDED

Comment

NONE PROVIDED

9. This section relates to the product's fate at the end of its lifecycle.

a. Describe the product's fate at the end of its lifecycle, including any product stewardship programs or other government imposed processes.

Landfill and vary little chemical and physical recycling capabilities that are still be developed.

Additional Supportive Attachments

NONE PROVIDED

Comment

NONE PROVIDED

b. How is the product intended to be disposed of, such as landfilling or via a sewage or septage system?

Landfill

c. The recycling rate of the product.

1

10. This section relates to Confidential Business Information.

1. Please list the section (number) and question (letter) of submission information which contains confidential business information.

Section Number	Question Letter
NONE PROVIDED	*NONE PROVIDED*

Status History

	User	Processing Status
6/27/2025 12:33:57 PM	Justin DeYoung	Draft
6/27/2025 12:36:56 PM	Justin DeYoung	Submitted
6/27/2025 12:37:02 PM	Justin DeYoung	In Process

Revisions

Revision	Revision Date	Revision By
Revision 1	5/13/2025 2:56 PM	Justin DeYoung
Revision 2	6/16/2025 4:18 PM	Justin DeYoung
Revision 3	6/19/2025 11:16 AM	Justin DeYoung
Revision 4	6/23/2025 11:05 AM	Justin DeYoung
Revision 5	6/27/2025 12:33 PM	Justin DeYoung

PFAS - Currently Unavoidable Use Proposal

version 1.2

(Submission #: HQC-ZQC8-3D9RZ, version 3)

Details

Submission ID HQC-ZQC8-3D9RZ

Status In Process

Form Input

1. Submitter Information. (1 of 2)

Instructions

Provide the contact information for your organization.

a. Submitter

First Name Leah

Last Name Sober

Title

NONE PROVIDED

Organization Name

S.C. Johnson and Son, Inc.

Phone Type	Number	Extension
Business	2622602000	3546

Email

lmsober@scj.com

Mailing Address

1525 HOWE ST

RACINE, WI 53403-2237

b. Additional Submitter Details

If you have an additional or co-submitter, you may add them by clicking the Add New Submitter button. You can also add an additional submitter by clicking the Duplicate Submitter button, which will create a new submitter record by copying the first submitter. Duplicate Submitter details can be updated as needed.

1. Submitter Information. (2 of 2)

Instructions

Provide the contact information for your organization.

a. Submitter

First Name Nicole
Last Name Nelson

Title
NONE PROVIDED

Organization Name
S.C. Johnson and Son, Inc.

Phone Type	Number	Extension
Business	2622602000	

Email
NMNelson@scj.com

Mailing Address

1525 HOWE ST

RACINE, WI 53403-2237

b. Additional Submitter Details

If you have an additional or co-submitter, you may add them by clicking the Add New Submitter button. You can also add an additional submitter by clicking the Duplicate Submitter button, which will create a new submitter record by copying the first submitter. Duplicate Submitter details can be updated as needed.

2. Brief description of the type of product to which PFAS is intentionally added.

2a. Product Category

Product Category Name
Cosmetic product

The descriptive name of the product.
SBS-40 Cream - Cartridge O-Ring

b. A brief narrative of the product; its physical structure; and appearance; how it functions; and if applicable, its place in larger items, systems, or processes.
We are submitting this Currently Unavoidable Use (CUU) application out of an abundance of caution, as it is not clear whether the items in question fall within the scope of Maine's PFAS regulations both because of their forms and functions as well as the fact that they may not have been intentionally formulated with PFAS.

Although this product may not have been intentionally formulated with PFAS and may not clearly fall within a regulated product category, we recognize that certain internal components within the delivery system may raise questions under the current regulatory definitions. Accordingly, we are submitting this CUU request provisionally to seek clarification and with reservation of rights to contest the characterizations under Maine's PFAS regulations.

This submission is made in good faith, with the intent to cooperate fully with the Maine Department of Environmental Protection and to support the state's efforts to reduce PFAS exposure.

The packaging container or "cartridge" for the following products contains an O-ring that contains Vinylidene fluoride-hexafluoropropene polymer (AKA "Viton A") - CAS 9011-17-0:
- SBS® 40 Skin Conditioning Cream Refill

This O-ring is used as a dynamic seal within the lotion and cream specific pump and provides the seal on the liquid pump.

These 1-liter cartridges are used within a wall-mounted dispenser to provide easy dispensing to professionals in the in the industrial, commercial and healthcare and food service/processing markets.

To find your GPC Category and code, visit https://gpc-browser.gs1.org/

c. GPC Category, if applicable.

GPC Category
NONE PROVIDED

d. GPC Code, if applicable.

GPC Code
NONE PROVIDED

e. HTS Code, if applicable.

HTS Code
3304.99.5000

f. NAICS code for sector or sectors in which the products containing intentionally added PFAS will be utilized.
561210-Facilities Support Services
722310-Food Service Contractors
623312-Assisted Living Facilities for the Elderly

3. Explanation of why the availability of PFAS in this specific product is essential for health safety or the functioning of society.

Maine defines "Essential for health, safety or the functioning of society" to mean: "a use of a PFAS in a product when the function provided by the PFAS is necessary for the product to perform as intended, such that the unavailability of the PFAS for use in the product would cause the product to be unavailable, which would result in: (1) A significant increase in negative health outcomes; (2) An inability to mitigate significant risks to human health or the environment; or (3) A significant disruption of the daily functions on which society relies."

a. An explanation of why the availability of PFAS in this specific product is essential for health safety or the functioning of society.
These 1-liter lotion cartridges are essential for health and safety because they provide accessible skin hydration in high-risk environments like industrial, healthcare, and food service settings. Regular use helps prevent skin damage, irritation, supporting worker well-being and hygiene compliance in critical sectors.

If needed, attach additional information.
NONE PROVIDED
Comment
NONE PROVIDED

4. Description of how the specific use of PFAS in the product is essential to the function of the product.

a. Please provide a description of how and why PFAS is essential to the function of the product. (This may include a description of the negative impact that would be caused by the unavailability of PFAS for use in the product and the subsequent unavailability or unsatisfactory performance of the product).
Viton as an inert ingredient has superior properties to provide the seal functionality while ensuring that there is chemical compatibility with these complex formulations.

b. Please provide a description of the specific characteristic or combination of characteristics that necessitate the use of PFAS in the product
This material has unique compatibility with the complex formulation bases.

c. If this use of PFAS in the product is required by federal or state law or regulation, please provide the following.

Type	Citation
Not Applicable	*NONE PROVIDED*

5. Description of reasonably available alternatives for this specific use of PFAS.

Please provide a description of reasonably available alternatives for this specific use of PFAS. Include an evaluation of the following aspects in your description (attach supporting documentation if necessary).

a. Identification of specific compounds, classes of materials, or combinations of materials identified as potential alternatives including the removal of PFAS without substitution.
Potential alternatives are silicones, EPDM and other elastomers, however there are current challenges with the compatibility with the formulations.

b. An assessment of how the materials listed above meet or fail to meet the criteria that necessitate the use of PFAS chemicals.
There is degradation of the material due to chemical incompatibility, which ultimately leads to seal failures. The degradation appears as cracks, brittleness, hardness, or swelling.

c. An assessment of whether materials identified above are available in sufficient quantities to meet production needs.
Sufficient materials (types) have not been qualified, however with additional time, we believe that we could find alternative materials that could be compatible with these chemistries.

d. An assessment of the anticipated cost difference between obtaining PFAS for use in the product subject to the proposal and obtaining the material identified above, for the same purpose.
Cost is negligible; the concern again, is compatibility and ultimately functionality of the dispensing system to deliver the product.

e. A comparison of the known risks to human health and the environment between PFAS and the alternative materials identified above.
Not available

f. An assessment of whether there are feasible changes to the manufacturing process of the product that would eliminate the need for PFAS.
We're also considering redesigning the system to exclude O-rings to provide greater flexibility for usage with various formulation chemistries.

Attach supporting documentation if necessary,

NONE PROVIDED

Comment

NONE PROVIDED

6. List of federal regulations, other State of Maine rules, and regulations of other states which the product is subject to by reason of containing intentionally added PFAS.

a. Please provide a list of federal regulations, other State of Maine rules, and regulations of other states which the product is subject to by reason of containing intentionally added PFAS.
We acknowledge that this product may also fall within the scope of Minnesota's PFAS prohibitions. However, we understand that the Minnesota Legislature has provided a temporary exemption through enforcement discretion for electronic and other internal components in this category. The state is actively evaluating how to address this regulatory complexity, and we are monitoring developments closely to ensure continued compliance.

7. List of sales prohibitions that the product is subject to because of containing intentionally added PFAS.

a. Please provide a list of sales prohibitions that the product is subject to because of containing intentionally added PFAS. If there are no sales prohibitions, please type "none" into the Product Category Name.

Product Category	Product Category Name	Prohibition Citation	Prohibition Type	Have you filed a proposal?	Proposal Status

b. If a prohibition listed above is absolute, please provide a list of comparable products that the proposer is aware of remaining available for sale, offered for sale, or distributed for sale within that specific jurisdiction.

NONE PROVIDED

c. If the prohibition cited above is absolute, please provide justification explaining how products available in compliance with that prohibition are not reasonably available alternatives for the product subject to this CUU proposal in the State of Maine.

NONE PROVIDED

d. If the prohibition cited above is absolute, please provide an explanation and supporting documentation of why those products containing PFAS alternatives listed above would not perform as intended in the State of Maine due to differing physical or climate conditions.

NONE PROVIDED

Attach additional information.

NONE PROVIDED

Comment

NONE PROVIDED

8. This section relates to information known or reasonably ascertainable by the submitter regarding the impacts on human health or the environment as a result of PFAS in the product.

a. Any information documenting impacts on human health as a result of the specific use of PFAS in the product.

PFAS are capable of causing a variety of effects including cancer, reproductive effects, immune effects, and other health outcomes. The effects depends on the duration, the route of exposure and the dose which is expected to be minimal in this product as the contact to human is indirect.

1. PMID: 33017053

b. Provide a description of the likely pathways of human exposure for the specific use of PFAS in the product.

The pump in this product contains an O-ring seal that could potentially contact the formula during dispensary. This contact could result in a minimal dermal exposure during product use.

c. Provide any information documenting environmental impacts because of the specific use of PFAS in the product.

Toxicological assessments indicate that Viton A meets the criteria outlined by the OECD for Polymers of Low Concern (PLCs) (OECD, 2009). As a high molecular weight fluoropolymer, Viton A is considered to have minimal environmental risks (Henry et al., 2018). It is chemically and thermally stable, insoluble in water, and non-mobile, which significantly reduces its potential for long-range environmental transport. Additionally, it exhibits low bioavailability and bioaccumulation potential and contains negligible levels of leachable low molecular weight substances (Henry et al., 2018). Due to these properties and its classification as a PLC, there are currently no suitable alternatives that offer the same performance with lower environmental impact. However, the scientific rationale for the low environmental impact of fluoropolymers like Viton A is not conclusively supported, as highlighted by Lohmann et al. (2020), who emphasize that data gaps and methodological limitations hinder definitive assessments of their environmental persistence and toxicity.

References

Henry BJ, Carlin JP, Hammerschmidt JA, Buck RC, Buxton LW, Fiedler H, Seed J, Hernandez O. (2018). A critical review of the application of polymer of low concern and regulatory criteria to fluoropolymers. Integr Environ Assess Manag. 14(3):316-334. doi: 10.1002/ieam.4035.

Lohmann R, Cousins IT, DeWitt JC, Gl�ge J, Goldenman G, Herzke D, Lindstrom AB, Miller MF, Ng CA, Patton S, Scheringer M, Trier X, Wang Z. (2020). Are Fluoropolymers Really of Low Concern for Human and Environmental Health and Separate from Other PFAS? Environ Sci Technol. 54(20):12820-12828. doi: 10.1021/acs.est.0c03244.

OECD (2009). https://one.oecd.org/document/ENV/JM/MONO%282009%291/en/pdf

d. Provide a description of any likely pathways for environmental release of PFAS because of the specific use of PFAS in the product.

No pathways for direct environmental releases are anticipated from the use of this product. End-of-life disposal to landfill are the main source of environmental exposure.

If needed, attach additional information.

NONE PROVIDED

Comment

NONE PROVIDED

9. This section relates to the product's fate at the end of its lifecycle.

a. Describe the product's fate at the end of its lifecycle, including any product stewardship programs or other government imposed processes.

Empty containers are disposed of as general waste ending up in landfills

Additional Supportive Attachments

NONE PROVIDED

Comment

NONE PROVIDED

b. How is the product intended to be disposed of, such as landfilling or via a sewage or septage system?

Landfill

c. The recycling rate of the product.

0

10. This section relates to Confidential Business Information.

1. Please list the section (number) and question (letter) of submission information which contains confidential business information.

Section Number	Question Letter
NONE PROVIDED	*NONE PROVIDED*

Status History

	User	Processing Status
6/9/2025 5:15:34 PM	Leah Sober	Draft
6/10/2025 5:19:48 PM	Leah Sober	Submitted
6/10/2025 5:19:52 PM	Leah Sober	In Process

Revisions

Revision	Revision Date	Revision By
Revision 1	5/30/2025 4:46 PM	Leah Sober
Revision 2	5/30/2025 5:46 PM	Leah Sober
Revision 3	6/9/2025 5:15 PM	Leah Sober

PFAS - Currently Unavoidable Use Proposal

version 1.2

(Submission #: HQC-Y1XK-HXXFJ, version 1)

Details

Submission ID HQC-Y1XK-HXXFJ
Status In Process

Form Input

1. Submitter Information. (1 of 1)

Instructions

Provide the contact information for your organization.

a. Submitter

First Name	Last Name
Rony	Khoury

Title
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Mailing Address

2 RIVERFRONT PLZ
NEWARK, NJ 07102-5451

b. Additional Submitter Details

If you have an additional or co-submitter, you may add them by clicking the Add New Submitter button. You can also add an additional submitter by clicking the Duplicate Submitter button, which will create a new submitter record by copying the first submitter. Duplicate Submitter details can be updated as needed.

2. Brief description of the type of product to which PFAS is intentionally added.

2a. Product Category

Product Category Name
Upholstered furniture

The descriptive name of the product.
Massage Chair

b. A brief narrative of the product; its physical structure; and appearance; how it functions; and if applicable, its place in larger items, systems, or processes.
Our massage chairs help to mobilize the spine, promote relaxation, and improve the flexibility of the lower back, middle back, and neck. The stretching techniques of these massage chairs are excellent for post-workout relaxation or to shake off sleep and stiffness as a morning rejuvenation session. Our massage chairs offer a full range of stretching techniques which may include Neck, Pelvis, Chest, Leg, Lower Back, and Core. We offer a range of massage chair models, including compact 27-inch designs and larger models. They are designed for individual use and are made of PFAS-free and flame retardant-free leather upholstery.

To find your GPC Category and code, visit https://gpc-browser.gs1.org/

c. GPC Category, if applicable.

GPC Category
Household/Office Chairs/Stools (Powered)

d. GPC Code, if applicable.

GPC Code
10002192

e. HTS Code, if applicable.

HTS Code

f. NAICS code for sector or sectors in which the products containing intentionally added PFAS will be utilized.
337121-Upholstered Household Furniture Manufacturing

3. Explanation of why the availability of PFAS in this specific product is essential for health safety or the functioning of society.

Maine defines "Essential for health, safety or the functioning of society" to mean: "a use of a PFAS in a product when the function provided by the PFAS is necessary for the product to perform as intended, such that the unavailability of the PFAS for use in the product would cause the product to be unavailable, which would result in: (1) A significant increase in negative health outcomes; (2) An inability to mitigate significant risks to human health or the environment; or (3) A significant disruption of the daily functions on which society relies."

a. An explanation of why the availability of PFAS in this specific product is essential for health safety or the functioning of society.
Massage chairs are beneficial for relaxation and therapeutic purposes, offering better sleep quality, muscle recovery, and stiffness relief. PFAS chemicals are used specifically in the ball bearings of internal mechanical components. They help prevent mechanical noise and ensure smooth and safe operation, while ensuring longevity and performance of the product. Without these PFAS-containing components, these massage chairs would not be able to function as designed.

If needed, attach additional information.
NONE PROVIDED
Comment
NONE PROVIDED

4. Description of how the specific use of PFAS in the product is essential to the function of the product.

a. Please provide a description of how and why PFAS is essential to the function of the product. (This may include a description of the negative impact that would be caused by the unavailability of PFAS for use in the product and the subsequent unavailability or unsatisfactory performance of the product).
PFAS chemicals are used specifically in the ball bearings of internal mechanical components. They help prevent mechanical noise and ensure smooth and safe operation, while ensuring longevity and performance of the product. Without these PFAS-containing components, these massage chairs would not be able to function as designed.

b. Please provide a description of the specific characteristic or combination of characteristics that necessitate the use of PFAS in the product
Ball bearings are used to reduce friction and ensure smooth and safe operability of internal mechanical components.

c. If this use of PFAS in the product is required by federal or state law or regulation, please provide the following.

Type	Citation
Not Applicable	*NONE PROVIDED*

5. Description of reasonably available alternatives for this specific use of PFAS.

Please provide a description of reasonably available alternatives for this specific use of PFAS. Include an evaluation of the following aspects in your description (attach supporting documentation if necessary).

a. Identification of specific compounds, classes of materials, or combinations of materials identified as potential alternatives including the removal of PFAS without substitution.
As of now, according to our parts supplier, the only alternatives that have been tested are PFAS-free alternatives that do not reduce friction and mechanical noise as the PFAS-containing components do. The names of the alternatives have not been made available to us as it is proprietary information.

b. An assessment of how the materials listed above meet or fail to meet the criteria that necessitate the use of PFAS chemicals.
As stated above, the alternative materials necessitate the use of PFAS chemicals because they do not remove friction noise and ensure smooth operation the way the PFAS-containing components do.

c. An assessment of whether materials identified above are available in sufficient quantities to meet production needs.
We are not sure at this time whether the alternative materials are available in sufficient quantities.

d. An assessment of the anticipated cost difference between obtaining PFAS for use in the product subject to the proposal and obtaining the material identified above, for the same purpose.
Information regarding costs have not been made available to us at this time.

e. A comparison of the known risks to human health and the environment between PFAS and the alternative materials identified above.
The PFAS used in these internal mechanical components is a fluoropolymer that is considered safe and poses little known risks to human health. At this time, we do not know what the risks of the alternative materials are to human health and the environment.

f. An assessment of whether there are feasible changes to the manufacturing process of the product that would eliminate the need for PFAS.
If a PFAS-free alternative that meets the safety requirements of our product is identified and made available, the need for PFAS in our product would be eliminated. At this time, no known alternative is available to us.

Attach supporting documentation if necessary,
NONE PROVIDED
Comment
NONE PROVIDED

6. List of federal regulations, other State of Maine rules, and regulations of other states which the product is subject to by reason of containing intentionally added PFAS.

a. Please provide a list of federal regulations, other State of Maine rules, and regulations of other states which the product is subject to by reason of containing intentionally added PFAS.
Minnesota HF2310 "Amara's Law"
Colorado HB 22-1345

7. List of sales prohibitions that the product is subject to because of containing intentionally added PFAS.

a. Please provide a list of sales prohibitions that the product is subject to because of containing intentionally added PFAS. If there are no sales prohibitions, please type "none" into the Product Category Name.

Product Category	Product Category Name	Prohibition Citation	Prohibition Type	Have you filed a proposal?	Proposal Status
Upholstered furniture	Massage chairs	Minnesota HF 2310	Based on a process similar to the State of Maine's Currently Unavoidable Use determination	Yes	Other: Minnesota legislature has proposed an amendment to the law that exempts the use of PFAS in internal electrical/mechanical components of all products subject to the 2026 ban and would be prohibited with the 2032 ban.

b. If a prohibition listed above is absolute, please provide a list of comparable products that the proposer is aware of remaining available for sale, offered for sale, or distributed for sale within that specific jurisdiction.

NONE PROVIDED

c. If the prohibition cited above is absolute, please provide justification explaining how products available in compliance with that prohibition are not reasonably available alternatives for the product subject to this CUU proposal in the State of Maine.

NONE PROVIDED

d. If the prohibition cited above is absolute, please provide an explanation and supporting documentation of why those products containing PFAS alternatives listed above would not perform as intended in the State of Maine due to differing physical or climate conditions.

NONE PROVIDED

Attach additional information.

NONE PROVIDED

Comment

NONE PROVIDED

8. This section relates to information known or reasonably ascertainable by the submitter regarding the impacts on human health or the environment as a result of PFAS in the product.

a. Any information documenting impacts on human health as a result of the specific use of PFAS in the product.

NONE PROVIDED

b. Provide a description of the likely pathways of human exposure for the specific use of PFAS in the product.

NONE PROVIDED

c. Provide any information documenting environmental impacts because of the specific use of PFAS in the product.

NONE PROVIDED

d. Provide a description of any likely pathways for environmental release of PFAS because of the specific use of PFAS in the product.

NONE PROVIDED

If needed, attach additional information.

NONE PROVIDED

Comment

NONE PROVIDED

9. This section relates to the product's fate at the end of its lifecycle.

a. Describe the product's fate at the end of its lifecycle, including any product stewardship programs or other government imposed processes.

As of now, there are no state or federal end-of-life stewardship laws for upholstered furniture, including massage chairs.

Additional Supportive Attachments

NONE PROVIDED

Comment

NONE PROVIDED

b. How is the product intended to be disposed of, such as landfilling or via a sewage or septage system?
Landfill

c. The recycling rate of the product.
1

10. This section relates to Confidential Business Information.

1. Please list the section (number) and question (letter) of submission information which contains confidential business information.

Section Number	Question Letter
NONE PROVIDED	*NONE PROVIDED*

Status History

	User	Processing Status
5/28/2025 1:45:15 PM	Rony Khoury	Draft
6/1/2025 10:45:09 AM	Rony Khoury	Submitted
6/1/2025 10:45:12 AM	Rony Khoury	In Process