MaineDOT Qualified Products Acceptance Criteria

Asphalt Release Agents

Overview

Products on the Asphalt Release Agents list (ARA) are required to be tested through AASTHO Product Evaluation & Audit Solutions (formerly NTPEP)). In addition, these products must remain current with AASTHO Product Evaluation & Audit Solutions (formerly NTPEP) policy regarding periodic re-testing as required by the program. Please include the AASTHO Product Evaluation & Audit Solutions (formerly NTPEP) ID# with submittal.

Asphalt Release Agents (ARA) are used to facilitate the release of the hot mix asphalt (HMA) from production plant equipment such as slat elevators, truck beds on trucks transporting this material to project sites, and on all roadway paving equipment such as the paver, roller, and hand tools.

The ARAs are used in lieu of diesel fuel and other solvents which strip or separate the asphalt from the aggregate in paving mixtures and may pose potential fire and other safety hazards to workers.

Criteria

MaineDOT Standard Specifications: Current Version, Section: 401 – Hot Mix Asphalt Pavements AASHTO T383 Standard Test Method for the Evaluation of Asphalt Release Agents (ARAs).

The following are MaineDOT's minimum requirements for asphalt release agents per AASTHO Product Evaluation & Audit Solutions (formerly NTPEP) Test Results:

7 Day Stripping Test: Asphalt release agents shall not strip asphalt from the aggregate at diluted or full strengths. Any change in color of liquid, visual stripping of asphalt, or mass loss/gain greater than 0.20 % shall be reason for rejection.

Asphalt Performance Test Results: Does not fail after 3 pours.

MaineDOT also maintains safety requirements for Asphalt Release Agents, these requirements are listed at the end of this document in Appendix A.

PRODUCT CONFORMITY: At the discretion of MaineDOT, any shipment of product to a MaineDOT location may be tested, such as by infrared or gas chromatography, for compliance with the SDS and uniformity with the formulation of the approved product (where applicable).

NOTE: MaineDOT may require a field evaluation before final acceptance and inclusion on the Qualified Products List (QPL).

A vendor who wishes to have products preapproved for future use should contact MaineDOT's Product Evaluation Coordinator via email at NewProducts.MaineDOT@maine.gov or by calling (207) 557-1788

Submittals

Product Submittal Packets shall include a COMPLETETED:

- New Product Evaluation form
- Current Technical Data Sheet
- Current Safety Data Sheet (SDS)
- Third Party, Independent Test Results OR AASTHO Product Evaluation & Audit Solutions (formerly NTPEP) testing ID for those products requiring this testing

Incomplete submittals will not be evaluated for inclusion on MaineDOT's Product Lists.

All reports shall be issued and signed by an authorized laboratory representative. The report shall include date of testing, product name, and the physical and/or chemical requirements stated herein.

Product Changes

Any change in a product, such as formulation, shall require re-testing (through AASTHO Product Evaluation & Audit Solutions (formerly NTPEP) if required) or independent, third-party lab Manufacturers shall notify MaineDOT of products changes and resubmit as a new product for re-evaluation, failure to do so may result in removal of product from MaineDOT's QPL. Manufacturers shall submit, for re-evaluation, an updated independent analytical laboratory report (or AASTHO Product Evaluation & Audit Solutions (formerly NTPEP) testing ID) prior to approval or purchase by MaineDOT.

Recertifications

MaineDOT requires re-certification by all manufacturers every five years (except for electrodes used for field welding which are recertified every year) to ensure that product names and formulations have remained the same since the product was originally placed on this list and that products are still relevant and in production. Where applicable, this shall include the most recent AASTHO Product Evaluation & Audit Solutions (formerly NTPEP) testing ID. Additionally, AASTHO Product Evaluation & Audit Solutions (formerly NTPEP) provides for retesting products. A lapse of AASTHO Product Evaluation & Audit Solutions (formerly NTPEP) testing/audit schedule as set forth in the associated workplan shall result in disqualification of the product. Manufacturers of any products requiring MASH testing must contact MaineDOT Product

Evaluation Program of any changes to their products. Manufacturers are responsible for tracking their recertification dates, reminders will not be sent. Failure to recertify products may result in removal from the QPL.

Other Information

The Department continues to evaluate its Acceptance Criteria and reserves the right to revise the criteria and/or withdraw product qualification at any time for any reason without notice. Furthermore, the ability of a product to meet these requirements does not necessarily guarantee addition to the Qualified Products List. Reminder that, products once placed on the Qualified Products List are to be considered prequalified for use only, meaning that they have undergone preliminary review for compliance with MaineDOT, and AASHTO specifications. As with all products, final approval rests with the Designer, Project Manager, Supplier and/or Resident to determine if a product best suits the need of a particular project.

If you are experiencing difficulties reading or printing this page, or have questions regarding the Qualified Products List website, please contact the Product Evaluation Program Coordinator at (207) 557-1788 or by email at: NewProducts.MaineDOT@maine.gov

Appendix A: Safety Requirements

MaineDOT safety requirements are intended to address asphalt release agents which protect worker safety and have low or no environmental impact. The manufacturer shall submit documentation to show the product complies with the following:

Contain no components that exceed EPA acceptable limits and contain no polychlorinated biphenyls (PCBs), Do not contain flammable materials such as solvents or petroleum elements, Have no Flash Point below 400°F (204°C) on the non-diluted product as measured by ASTM D 93. If no Flash Point is observed due to boiling of the material, submit documentation indicating the test procedure and equipment used for Flash Point determination.

Comply with EPA regulations for pH levels (2-12.5)

Meet the following ratings under the Globally Harmonized Systems (GHS) Hazard Categories: PLEASE NOTE: GHS Categories are rated on a scale of 1 being the MOST hazardous to 4 (5) being the LEAST hazardous.

Category	**Maximum Allowable Hazard Level**	**And NOT be:**
Flammable Liquids	Category 4	Pyrophoric Self-Heating
Reactivity	Non-reactive	Self-reactive Reactivity with water Oxidizer Organic peroxide Corrosivity with water
Acute Toxicity	Category 5	Germ Cell Mutagenic Carcinogenic Reproductive toxin Target Organs System Toxin (TOST, single or repeated exposure) Aspiration toxin
Respiratory Sensitization	Not Classified as a Sensitizer	
Skin Corrosion/Irritation	Category 3	
Skin Sensitizer	Not Classified as a Sensitizer	
Eye Effects	Category 2B	pH ≤ 2.0 or ≥ 12.5

Maine DOT Safety Data Sheet (SDS) Requirements:

All Safety Data Sheets (SDS) must meet, at a minimum, the OSHA Hazard Communication Standard (HCS) which follows the Globally Harmonized System of Classification and Labeling of Chemicals (GHS). Guidance may be found at https://www.osha.gov/dsg/hazcom/ghsguideoct05.pdf. While a manufacturer may use terms such as “trade secret” within the SDS, it must be demonstrated that doing so complies with the regulations. If terms such as “trade secret” are used, and it is found during testing that these terms were misapplied in compliance with the Hazard Communication Standard, any product approval previously granted will be terminated until the issue is resolved to the satisfaction of Maine DOT. Due to Maine’s unique handling and disposal responsibilities additional information may be requested. This additional information will be used only for the purpose of worker protection and to ensure the proper disposal of materials in accordance with local regulations. Maine DOT will otherwise maintain the confidentiality of the additional information.

The following table contains examples of additional information that may be required:

NOTE: The following table can also be found in OSHA’s A Guide to The Globally Harmonized System of Classification and Labeling of Chemicals (GHS), Fig. 4.14, pg. 47.

SDS Section and Heading		**Specific Information Elements.**
1	Identification +	GHS Product identifier (e.g. Product name as provided to Maine DOT) Other means of identification (e.g. product family, synonyms, etc.) Recommended use Restrictions on use Emergency telephone number and any restrictions on the use of that number, if applicable
2	Hazard Identification	Hazard classification (class, category) of substance or mixture or a description of the identified hazard for Physical or Health Hazards Not Otherwise Classified Label elements: Symbol (image) or the name of the symbol (e.g., flame, skull and crossbones) Signal word Hazard statement(s) Precautionary statement(s)

		Other hazards which do not result in classification (e.g., molten metal hazard)
3	Composition/ Information on ingredients	When a hazardous product is a material or substance: Chemical name Common name and synonyms Chemical Abstract Service (CAS) registry number and any unique identifiers Chemical name of impurities, stabilizing solvents and/or additives* For each material or substance in a mixture that is classified in a health hazard class**: Chemical name Common name and synonyms CAS registry number and any unique identifiers Concentration (Total sum of concentration ranges should be 100 +/- 10%) % Concentration ranges shall not exceed the following: 75-100 max range of 20% (i.e. 65-85% for a 75% theoretical concentration) 50-74 max range of 15% (i.e. 42.5-57.5% for a 50% theoretical concentration) 25-49 max range of 10% (i.e. 20-30% for a 25% theoretical concentration) 15-24 max range of 7% (i.e.11.5-18.5 for a 15% theoretical concentration) 10-14 max range of 5% (i.e. 7.5-12.5 for a 10% theoretical concentration) 0-9 max range of 2.5% (i.e. 0-2.5 for a 1.25% theoretical concentration)

4	First-aid measures	First-aid measures by route of exposure: Inhalation Skin contact Eye contact	Ingestion Most important symptoms and effects (acute or delayed) Immediate medical attention and special treatment, if necessary
5	Fire-fighting measures	Suitable extinguishing media Unsuitable extinguishing media Specific hazards arising from the hazardous product (e.g., hazardous combustion products) Special protective equipment and precautions for fire-fighters	
6	Accidental release measures	Personal precautions, protective equipment and emergency procedures Methods and materials for containment and cleaning up	
7	Handling and storage	Precautions for safe handling Conditions for safe storage (including incompatible materials)	
8	Exposure controls/ Personal protection	Control parameters, including occupational exposure guidelines or biological exposure limits and the source of those values Appropriate engineering controls Individual protection measures (e.g. personal protective equipment)	
9	Physical and chemical properties	Appearance (physical state, color, etc.) Odor Odor threshold pH Melting point/Freezing point Initial boiling point/boiling range Flash point Evaporation rate Flammability (solid; gas) Lower flammable/explosive limit	Upper flammable/explosive limit Vapor pressure Vapor density Relative density Solubility Partition coefficient - n-octanol/water Auto-ignition temperature Decomposition temperature Viscosity

10	Stability and reactivity	Reactivity Chemical stability Possibility of hazardous reactions Incompatible materials	Conditions to avoid (e.g., static discharge, shock, or vibration) Hazardous decomposition products
11	Toxicological information	Concise but complete description of the various toxic health effects and the data used to identify those effects, including: Information on the likely routes of exposure (inhalation, ingestion, skin and eye contact) Symptoms related to the physical, chemical and toxicological characteristics Delayed and immediate effects, and chronic effects from short-term and long-term exposure Numerical measures of toxicity	
12	Ecological information***	Ecotoxicity Persistence and degradability Bioaccumulative potential	Mobility in soil Other adverse effects
13	Disposal considerations***	Information on safe handling for disposal and methods of disposal, including any contaminated packaging	
14	Transport information***	UN number UN proper shipping name Transport hazard class(es) Packing group	Environmental hazards Transport in bulk, if applicable Special precautions
15	Regulatory information***	Safety, health and environmental regulations specific to the product	
16	Other information	Date of the latest revision of the SDS	

Regarding the above table

*These impurities and stabilizing products are those that are classified in a health hazard class and contribute to the classification of the material or substance.

**Each ingredient in the mixture must be listed when it is classified in a health hazard class and is present above the concentration limit that is designated for the hazard class in which it is classified or is present in the mixture at a concentration that results in the mixture being classified in any health hazard class.

***Sections 12 to 15 require the headings to be present, but under US regulations, the supplier has the option to not provide information in these sections. Maine DOT requires these sections be completed.

The supplier is required to provide information on each specific information element required on the SDS. In some cases, it may be appropriate for the supplier to state “not available” or “not applicable” instead of providing the specific information.

"Not available" means that the information could not be located or does not exist. For example, if the supplier cannot locate any studies that measure the odor threshold, which is reported in Section 9 of the SDS, the supplier would report "not available".

"Not applicable" means that the information element is not relevant. For example, if the product is odorless, then the odor threshold would be reported as "Not applicable".

NOTE: The supplier should not use the abbreviation "n.a." or "NA" without defining it, as it could mean "not applicable" or "not available" or something entirely different.