

**Summary of Railroad Right of Way Label Information (Lebelle Hicks 2015)**

Summary of RR ROW Labels									
Product	Streamline		Polaris	Esplanade	Aquaneat	Oust Extra		Chaparral	
Active Ingredients	Aminocyclopyrachlor	Metsulfuron	Imazapyr	Indaziflam	Glyphosate	Sulfometuron	Metsulfuron	Aminopyralid	Metsulfuron
EPA#	352-848		228-570	432-1516	228-365	352-622		62719-597	
Formulation	Dry Flowable		Soluble Concentrate	Soluble Concentrate	Soluble Concentrate	Dispersible granules		Soluble Concentrate	
AI or ae Concentration	39.5 ai %	12.6 ai%	4 lbs ae/gal	1.67 lbs ai/gal	7.5 pts/A	56.25 ai %	15 Aai%	0.525 lbs ae/gal	0.0945 lbs ai/gal
Max Application Rate (lb ai./acre)	0.28 lbs ai/A/yr	0.09 lbs ai/A/yr	1.5 lbs ae/A/yr	0.125 lbs/A/yr	1.875 lb ae/A	0.375 lbs ai/A/yr	0.1 lbs ai/A/yr	0.0135 lbs ae/A/yr	0.0024 lbs/A/yr
Surface Water Advisory	yes		no	yes	no	25 ft buffer		no	

Shaded areas include label parameters for products not included in the Bayer comparative environmental risk assessment (Bayer 2015)

Bayer 2015, Comparative Assessment of the Freshwater Aquatic Toxicity Profile for the Use of Indaziflam, Aminocyclopyrachlor, Imazapyr, and Metsulfuron-methyl For Railways

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Table 4: Aquatic Ecological Estimated Concentrations (90th Percentile) Calculated Using GENEEC								
Compound	Use rate	EEC ppb ( $\mu\text{g ai ae/L}$ )			EEC ppm ( $\text{mg ai ae/L}$ )			Reference
	lb ai/A	Peak	21- Day	60- Day	Peak	21- Day	60- Day	
Aminocyclopyrachlor	0.247	14.6	13.8	12.2	0.0146	0.0138	0.0122	Bayer 2015
Imazapyr	2.0	120.7	119.4	116.9	0.120	0.1194	0.1169	Bayer 2015
Indaziflam	0.065	2.2	2.0	1.8	0.0022	0.002	0.0018	Bayer 2015
Metsulfuron	0.079	4.8	4.6	12.2	0.0048	0.0046	0.00122	Bayer 2015

Acute Toxicity Risk Quotients of Freshwater Fish					
Active Ingredient	96 h LC50 ppm ( $\text{mg ai/L}$ )		Peak EEC ppm ( $\text{mg ai/L}$ )	Freshwater RQ	Reference
	Rainbow Trout	Bluegill			
Aminocyclopyrachlor	13	>120	0.0146	<0.01	Bayer 2015
Imazapyr	>100	>100	0.120	<0.01	Bayer 2015
Indaziflam	0.57	0.32	0.0022	<0.01	Bayer 2015
Metsulfuron	>150	>150	0.0048	<0.01	Bayer 2015

**Chronic Toxicity Risk Quotients of Freshwater Fish**

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Active Ingredient	NOEC ppm (mg ai/L)		21 d EEC ppm (mg ai/L)	Freshwater RQ	Reference
	Rainbow Trout	Fathead Minnow			
Aminocyclopyrachlor	11	n/a	0.0138	<0.01	Bayer 2015
Imazapyr	43.1	118	0.1194	<0.01	Bayer 2015
Indaziflam	n/a	0.464	0.002	<0.01	Bayer 2015
Metsulfuron	4.5	n/a	0.0046	<0.01	Bayer 2015

**Acute Toxicity Risk Quotients of Freshwater Invertebrates, Daphnia**

Active Ingredient	48 h EC50 ppm (mg ai/L)	Peak EEC ppm (mg/L)	Freshwater RQ	Reference
Aminocyclopyrachlor	39.7	0.0146	<0.01	Bayer 2015
Imazapyr	>100	0.1207	<0.01	Bayer 2015
Indaziflam	>9.88	0.0022	<0.01	Bayer 2015
Metsulfuron	>150	0.0048	<0.01	Bayer 2015

**Chronic Toxicity Risk Quotients of Freshwater Invertebrates; Daphnia**

Active Ingredient	21d NOEC ppm (mg a.i/L)	21 d EEC ppm (mg/L)	Freshwater RQ	Reference
Aminocyclopyrachlor	0.37	0.0138	0.04	Bayer 2015
Imazapyr	97.1	0.119.4	<0.01	Bayer 2015
Indaziflam	0.340	0.002.0	<0.01	Bayer 2015
Metsulfuron	n/a	0.0046	n/a	Bayer 2015

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<b>Acute Toxicity Risk Quotients of Aquatic Plants Vascular plants</b>					
<b>Active Ingredient</b>	<b>Duck Weed</b>	<b>Peak EEC ppm (mg ai/L)</b>	<b>Non-vascular RQs</b>	<b>Vascular RQs</b>	<b>Reference</b>
Aminocyclopyrachlor	0.000061	0.014.6	<0.01	<0.01	Bayer 2015
Imazapyr	0.024	0.1207	<0.01	<b>5</b>	Bayer 2015
Indaziflam	0.000061	0.0022	0.03	<b>36</b>	Bayer 2015
Metsulfuron	0.00036	0,0048	0.15	<b>13.3</b>	Bayer 2015

<b>Acute Toxicity Risk Quotients of Aquatic Plants Freshwater Non-vascular plants</b>						
<b>Active Ingredient</b>	<b>EC50 ppm (mg ai/L)</b>			<b>Peak EEC ppm (mg/L)</b>	<b>Non-vascular RQs</b>	<b>Reference</b>
	<b>Green Algae</b>	<b>Cyano-bacteria</b>	<b>Navicula</b>			
Aminocyclopyrachlor	120	<b>7.4</b>	38	0.014.6	<0.01	Bayer 2015
Imazapyr	71	<b>12.2</b>	41	0.1207	<0.01	Bayer 2015
Indaziflam	<b>0.074</b>	0.75	0.087	0.0022	0.03	Bayer 2015
Metsulfuron	<b>0.031</b>	n/a	n/a	0,0048	0.15	Bayer 2015