

SECTION 1: Identification

1.1. Identification

Product form : Mixture
 Product name : 8270 App IX Mix 1
 Product code : AL0-180101

1.2. Recommended use and restrictions on use

No additional information available

1.3. Supplier

Phenova
 6390 Joyce Dr. Suite 100
 Golden, CO 80403 - United States
 T 1-866-942-2978 - F 1-866-283-0269
info@phenova.com - www.phenova.com

1.4. Emergency telephone number

Emergency number : ChemTel Assistance (US/Canada) 1-800-255-3924
 ChemTel Assistance (International) +1 813-248-0585

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Flammable liquids Category 2	H225	Highly flammable liquid and vapor
Skin sensitization, Category 1	H317	May cause an allergic skin reaction
Carcinogenicity Category 1A	H350	May cause cancer

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) :

Danger

Hazard statements (GHS US) :

H225 - Highly flammable liquid and vapor
 H317 - May cause an allergic skin reaction
 H350 - May cause cancer

Precautionary statements (GHS US) :

P201 - Obtain special instructions before use.
 P202 - Do not handle until all safety precautions have been read and understood.
 P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P233 - Keep container tightly closed.
 P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
 P272 - Contaminated work clothing must not be allowed out of the workplace.
 P280 - Wear protective gloves/protective clothing/eye protection/face protection.
 P302+P352 - If on skin: Wash with plenty of water.
 P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 P308+P313 - If exposed or concerned: Get medical advice/attention.
 P321 - Specific treatment (see supplemental first aid instruction on this label).
 P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
 P363 - Wash contaminated clothing before reuse.
 P370+P378 - In case of fire: Use media other than water to extinguish.
 P403+P235 - Store in a well-ventilated place. Keep cool.
 P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

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2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	Conc.
Methylene Chloride (Component)	(CAS-No.) 75-09-2	97
Aramite (Component)	(CAS-No.) 140-57-8	0.1
atrazine (Component)	(CAS-No.) 1912-24-9	0.1
ethyl methacrylate (Component)	(CAS-No.) 97-63-2	0.1
ethyl methanesulfonate (Component)	(CAS-No.) 62-50-0	0.1
methyl methanesulfonate (Component)	(CAS-No.) 66-27-3	0.1
di-allate (Component)	(CAS-No.) 2303-16-4	0.1
chlordecone (Component)	(CAS-No.) 143-50-0	0.1
1,4-dioxane	(CAS-No.) 123-91-1	0.1
pentachloroethane	(CAS-No.) 76-01-7	0.1
propyzamide (Component)	(CAS-No.) 23950-58-5	0.1
phenacetin (Component)	(CAS-No.) 62-44-2	0.1
safrole (Component)	(CAS-No.) 94-59-7	0.1

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general	: Never give anything by mouth to an unconscious person. IF exposed or concerned: Get medical advice/attention.
First-aid measures after inhalation	: Allow affected person to breathe fresh air. Allow the victim to rest.
First-aid measures after skin contact	: Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Immediately call a poison center or doctor/physician. Wash with plenty of soap and water. Wash contaminated clothing before reuse.
First-aid measures after eye contact	: Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. Call a POISON CENTER or doctor/physician if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

Potential Adverse human health effects and symptoms	: Harmful if swallowed. Harmful in contact with skin.
Symptoms/effects after inhalation	: May cause cancer by inhalation.
Symptoms/effects after skin contact	: Repeated exposure to this material can result in absorption through skin causing significant health hazard. Harmful in contact with skin.
Symptoms/effects after ingestion	: Swallowing a small quantity of this material will result in serious health hazard.

4.3. Immediate medical attention and special treatment, if necessary

No additional information available

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire.

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Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard : Highly flammable liquid and vapor.
Explosion hazard : May form flammable/explosive vapor-air mixture. Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries. May form explosive peroxides.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment. DO NOT fight fire when fire reaches explosives. Evacuate area.
Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.
Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up in absorbent material. Collect spillage.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapors are flammable. Hazardous waste due to potential risk of explosion.
Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. No open flames. No smoking. Use only non-sparking tools. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from sources of ignition - No smoking.
Hygiene measures : Do not eat, drink or smoke when using this product. Gently wash with plenty of soap and water. Remove/Take off immediately all contaminated clothing. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment.
Storage conditions : Keep in fireproof place. Keep container tightly closed. Keep container tightly closed and in a well-ventilated place. Keep away from any flames or sparking source.
Incompatible products : Oxidizing agent.
Incompatible materials : Direct sunlight. Heat sources.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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ACGIH	Local name	Dichloromethane
ACGIH	ACGIH TWA (ppm)	50 ppm
ACGIH	Remark (ACGIH)	COHb-emia; CNS impair
ACGIH	Regulatory reference	ACGIH 2018
OSHA	Remark (OSHA)	(2) See Table Z-2.

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OSHA	Regulatory reference (US-OSHA)	OSHA
Aramite (140-57-8)		
Not applicable		
atrazine (1912-24-9)		
ACGIH	Local name	Atrazine
ACGIH	ACGIH TWA (mg/m ³)	2 mg/m ³ (Inhalable fraction)
ACGIH	Remark (ACGIH)	CNS convul; A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans: The agent is carcinogenic in experimental animals at a relatively high dose, by route(s) of administration, at site(s), of histologic type(s), or by mechanism(s) that may not be relevant to worker exposure. Available epidemiologic studies do not confirm an increased risk of cancer in exposed humans. Available evidence does not suggest that the agent is likely to cause cancer in humans except under uncommon or unlikely routes or levels of exposure)
ACGIH	Regulatory reference	ACGIH 2018
di-allate (2303-16-4)		
Not applicable		
ethyl methacrylate (97-63-2)		
Not applicable		
ethyl methanesulfonate (62-50-0)		
Not applicable		
chlordecone (143-50-0)		
Not applicable		
methyl methanesulfonate (66-27-3)		
Not applicable		
phenacetin (62-44-2)		
Not applicable		
propyzamide (23950-58-5)		
Not applicable		
safrole (94-59-7)		
Not applicable		
Methylene Chloride (75-09-2)		
ACGIH	Local name	Dichloromethane
ACGIH	ACGIH TWA (ppm)	50 ppm
ACGIH	Remark (ACGIH)	COHb-emia; CNS impair
ACGIH	Regulatory reference	ACGIH 2018
OSHA	Remark (OSHA)	(2) See Table Z-2.
OSHA	Regulatory reference (US-OSHA)	OSHA
pentachloroethane (76-01-7)		
Not applicable		
1,4-dioxane (123-91-1)		
ACGIH	Local name	1,4-Dioxane
ACGIH	ACGIH TWA (ppm)	20 ppm
ACGIH	Remark (ACGIH)	Liver dam
ACGIH	Regulatory reference	ACGIH 2018
OSHA	OSHA PEL (TWA) (mg/m ³)	360 mg/m ³

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1,4-dioxane (123-91-1)		
OSHA	OSHA PEL (TWA) (ppm)	100 ppm
OSHA	Regulatory reference (US-OSHA)	OSHA

8.2. Appropriate engineering controls

Appropriate engineering controls : Either local exhaust or general room ventilation is usually required.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Avoid all unnecessary exposure. Gloves. Protective clothing. Protective goggles. Safety glasses.

Hand protection:

Wear chemically resistant protective gloves. Wear suitable gloves resistant to chemical penetration

Eye protection:

Chemical goggles or safety glasses. Safety glasses

Skin and body protection:

Wear chemically protective gloves, lab coat or apron to prevent prolonged or repeated skin contact

Respiratory protection:

Wear appropriate mask

Personal protective equipment symbol(s):



Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
	: Colorless
	: characteristic
Odor threshold	: No data available
pH	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Highly flammable liquid and vapor.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available

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Explosion limits	: No data available
Explosive properties	: May form explosive peroxides.
Oxidizing properties	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Highly flammable liquid and vapor. May form flammable/explosive vapor-air mixture.

10.3. Possibility of hazardous reactions

Reacts vigorously with strong oxidizers and acids.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Open flame. Heat. Sparks. Overheating.

10.5. Incompatible materials

Oxidizing agent.

10.6. Hazardous decomposition products

May release flammable gases. May form explosive peroxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Aramite (140-57-8)	
LD50 oral rat	3900 mg/kg (Rat, Oral)
ATE US (oral)	3900 mg/kg body weight
di-allate (2303-16-4)	
LD50 oral rat	395 mg/kg (Rat, Oral)
LD50 dermal rabbit	2000 mg/kg (Rabbit, Dermal)
ATE US (oral)	395 mg/kg body weight
ATE US (dermal)	2000 mg/kg body weight
ethyl methacrylate (97-63-2)	
LD50 oral rat	13424 mg/kg body weight (Rat, Experimental value, Oral)
LD50 dermal rabbit	> 9100 mg/kg body weight (Rabbit, Experimental value, Dermal)
LC50 inhalation rat (mg/l)	55 mg/l (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Experimental value, Inhalation, 14 day(s))
ATE US (oral)	13424 mg/kg body weight
ATE US (vapors)	55 mg/l/4h
ATE US (dust, mist)	55 mg/l/4h
ethyl methanesulfonate (62-50-0)	
ATE US (oral)	500 mg/kg body weight
chlordecone (143-50-0)	
LD50 oral rat	95 mg/kg (Rat, Oral)
LD50 dermal rabbit	345 mg/kg (Rabbit, Dermal)
ATE US (oral)	95 mg/kg body weight
ATE US (dermal)	345 mg/kg body weight
methyl methanesulfonate (66-27-3)	
LD50 oral rat	225 mg/kg (Rat)
ATE US (oral)	225 mg/kg body weight
phenacetin (62-44-2)	
LD50 oral rat	> 1000 mg/kg (Rat)

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propyzamide (23950-58-5)	
LD50 oral rat	3350 mg/kg (Rat)
LD50 dermal rat	> 3160 mg/kg (Rat)
ATE US (oral)	3350 mg/kg body weight
safrole (94-59-7)	
LD50 oral rat	1950 mg/kg (Rat)
LD50 dermal rabbit	> 5000 mg/kg (Rabbit)
ATE US (oral)	1950 mg/kg body weight
Methylene Chloride (75-09-2)	
LD50 oral rat	> 2000 mg/kg body weight (OECD 401: Acute Oral Toxicity, Rat, Male / female, Experimental value, Oral)
LD50 dermal rat	> 2000 mg/kg body weight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal)
1,4-dioxane (123-91-1)	
LD50 oral rat	> 5000 mg/kg (Rat, Oral)
LD50 dermal rabbit	7600 mg/kg (Rabbit, Dermal)
LC50 inhalation rat (mg/l)	51 mg/l (4 h, Rat, Inhalation)
LC50 inhalation rat (ppm)	14250 ppm (4 h, Rat, Inhalation)
ATE US (dermal)	7600 mg/kg body weight
ATE US (vapors)	51 mg/l/4h
ATE US (dust, mist)	51 mg/l/4h
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitization	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
	Based on available data, the classification criteria are not met
Carcinogenicity	: May cause cancer.
Aramite (140-57-8)	
IARC group	2B - Possibly carcinogenic to humans
di-allate (2303-16-4)	
IARC group	3 - Not classifiable
ethyl methanesulfonate (62-50-0)	
IARC group	2B - Possibly carcinogenic to humans
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen
chlordecone (143-50-0)	
IARC group	2B - Possibly carcinogenic to humans
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen
methyl methanesulfonate (66-27-3)	
IARC group	2A - Probably carcinogenic to humans
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen
phenacetin (62-44-2)	
IARC group	1 - Carcinogenic to humans
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen
safrole (94-59-7)	
IARC group	2B - Possibly carcinogenic to humans
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen
Methylene Chloride (75-09-2)	
IARC group	2A - Probably carcinogenic to humans
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen
pentachloroethane (76-01-7)	
IARC group	3 - Not classifiable

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1,4-dioxane (123-91-1)	
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen
Reproductive toxicity	: Not classified Based on available data, the classification criteria are not met
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Potential Adverse human health effects and symptoms	: Harmful if swallowed. Harmful in contact with skin.
Symptoms/effects after inhalation	: May cause cancer by inhalation.
Symptoms/effects after skin contact	: Repeated exposure to this material can result in absorption through skin causing significant health hazard. Harmful in contact with skin.
Symptoms/effects after ingestion	: Swallowing a small quantity of this material will result in serious health hazard.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water : Harmful to aquatic life with long lasting effects.

Aramite (140-57-8)	
LC50 fish 1	0.32 mg/l (96 h, <i>Salmo gairdneri</i>)
EC50 Daphnia 1	0.16 mg/l (48 h, <i>Daphnia magna</i>)

ethyl methacrylate (97-63-2)	
LC50 fish 1	100 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, <i>Oncorhynchus mykiss</i> , Flow-through system, Experimental value, GLP)
EC50 Daphnia 1	> 66 mg/l (OECD 202: <i>Daphnia</i> sp. Acute Immobilisation Test, 48 h, <i>Daphnia magna</i> , Flow-through system, Fresh water, Experimental value, Locomotor effect)
ErC50 (algae)	> 110 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, <i>Pseudokirchneriella subcapitata</i> , Fresh water, Experimental value)

chlordecone (143-50-0)	
LC50 fish 1	0.036 mg/l (96 h, <i>Salmo gairdneri</i> , Literature study)
EC50 Daphnia 1	0.26 mg/l (48 h, <i>Daphnia magna</i> , Literature study)

phenacetin (62-44-2)	
LC50 fish 1	335 mg/l (LC50; 48 h)

propyzamide (23950-58-5)	
EC50 other aquatic organisms 1	3.4 mg/l (120 h; <i>Skeletonema costatum</i>)

Methylene Chloride (75-09-2)	
LC50 fish 1	193 mg/l (96 h, <i>Pimephales promelas</i> , Flow-through system, Fresh water, Experimental value)
EC50 Daphnia 1	168.2 mg/l (48 h, <i>Daphnia magna</i>)

pentachloroethane (76-01-7)	
LC50 fish 1	7 mg/l (LC50; 96 h; <i>Lepomis macrochirus</i>)
EC50 other aquatic organisms 1	134 mg/l (96 h; <i>Selenastrum capricornutum</i> ; Cell numbers)

1,4-dioxane (123-91-1)	
LC50 fish 1	13000 mg/l (96 h, <i>Pimephales promelas</i> , GLP)
EC50 Daphnia 1	8450 mg/l (24 h, <i>Daphnia magna</i>)

12.2. Persistence and degradability

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Persistence and degradability	May cause long-term adverse effects in the environment.

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Aramite (140-57-8)	
Persistence and degradability	Biodegradability in water: no data available.
atrazine (1912-24-9)	
Persistence and degradability	Biodegradability in soil: no data available. Not readily biodegradable in water.
di-allyl (2303-16-4)	
Persistence and degradability	Not readily biodegradable in water.
ethyl methacrylate (97-63-2)	
Persistence and degradability	Readily biodegradable in water.
ethyl methanesulfonate (62-50-0)	
Persistence and degradability	Biodegradability in water: no data available.
chlordecone (143-50-0)	
Persistence and degradability	Not readily biodegradable in water.
methyl methanesulfonate (66-27-3)	
Persistence and degradability	Biodegradability in water: no data available.
phenacetin (62-44-2)	
Persistence and degradability	Not readily biodegradable in water.
propylamide (23950-58-5)	
Persistence and degradability	Forming sediments in water. Biodegradable in the soil. Adsorbs into the soil. Photodegradation in the air.
safrole (94-59-7)	
Persistence and degradability	Biodegradability in water: no data available.
Methylene Chloride (75-09-2)	
Persistence and degradability	Biodegradable in the soil. Not readily biodegradable in water.
pentachloroethane (76-01-7)	
Persistence and degradability	Not readily biodegradable in water.
1,4-dioxane (123-91-1)	
Persistence and degradability	Non degradable in the soil. Not readily biodegradable in water.
Biochemical oxygen demand (BOD)	0 g O ₂ /g substance
ThOD	1.8 g O ₂ /g substance
BOD (% of ThOD)	0

12.3. Bioaccumulative potential

8270 App IX Mix 1	
Bioaccumulative potential	Not established.
Aramite (140-57-8)	
Partition coefficient n-octanol/water (Log Pow)	4.82
Bioaccumulative potential	Bioaccumable.
atrazine (1912-24-9)	
BCF fish 1	3 – 4 (Cyprinus carpio)
BCF fish 2	3 – 10 (Pisces)
BCF other aquatic organisms 1	52 (24 h, Chlorella sp.)
BCF other aquatic organisms 2	10 – 83 (Algae)
Partition coefficient n-octanol/water (Log Pow)	2.64
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
ethyl methacrylate (97-63-2)	
BCF fish 1	8.851 l/kg (BCFBAF v3.01, Estimated value, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	1.87 (Experimental value, Equivalent or similar to OECD 107, 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
ethyl methanesulfonate (62-50-0)	
Bioaccumulative potential	No bioaccumulation data available.

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chlordecone (143-50-0)	
BCF fish 1	1100 – 2200 (Pimephales promelas, Literature study, Chronic)
Partition coefficient n-octanol/water (Log Pow)	3.78 – 6.08 (Literature study)
Bioaccumulative potential	High potential for bioaccumulation (Log Kow > 5).
methyl methanesulfonate (66-27-3)	
Bioaccumulative potential	No bioaccumulation data available.
phenacetin (62-44-2)	
BCF fish 1	< <3/<30,BCF
Partition coefficient n-octanol/water (Log Pow)	1.58 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
propyzamide (23950-58-5)	
BCF other aquatic organisms 1	6-20,BCF
Partition coefficient n-octanol/water (Log Pow)	3.43 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
safrole (94-59-7)	
Partition coefficient n-octanol/water (Log Pow)	3.45 (Estimated value)
Methylene Chloride (75-09-2)	
BCF fish 1	2 – 40 (OECD 305: Bioconcentration: Flow-Through Fish Test, 6 week(s), Cyprinus carpio, Semi-static system, Fresh water, Experimental value, GLP)
Partition coefficient n-octanol/water (Log Pow)	1.25 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
pentachloroethane (76-01-7)	
BCF fish 1	60 – 68 (BCF; 672 h)
BCF fish 2	67 (BCF; 336 h)
Partition coefficient n-octanol/water (Log Pow)	2.89 – 3.67 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
1,4-dioxane (123-91-1)	
BCF fish 1	0.2 – 0.7 (Cyprinus carpio, Test duration: 6 weeks)
Partition coefficient n-octanol/water (Log Pow)	-0.27 (Experimental value)
Bioaccumulative potential	Not bioaccumulative.
12.4. Mobility in soil	
atrazine (1912-24-9)	
Ecology - soil	Toxic to flora. Not toxic to bees.
di-allate (2303-16-4)	
Ecology - soil	Not toxic to bees.
ethyl methacrylate (97-63-2)	
Partition coefficient n-octanol/water (Log Koc)	1.222 – 1.933 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Ecology - soil	Highly mobile in soil.
chlordecone (143-50-0)	
Ecology - soil	Adsorbs into the soil.
Methylene Chloride (75-09-2)	
Surface tension	0.028 N/m (20 °C)
Ecology - soil	Low potential for adsorption in soil. May be harmful to plant growth, blooming and fruit formation.
1,4-dioxane (123-91-1)	
Surface tension	0.037 N/m (20 °C)

12.5. Other adverse effects

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8270 App IX Mix 1	
Aramite (140-57-8)	
atrazine (1912-24-9)	
di-allate (2303-16-4)	
ethyl methacrylate (97-63-2)	
ethyl methanesulfonate (62-50-0)	
chlordecone (143-50-0)	
methyl methanesulfonate (66-27-3)	
phenacetin (62-44-2)	
propyzamide (23950-58-5)	
safrole (94-59-7)	
Methylene Chloride (75-09-2)	
pentachloroethane (76-01-7)	
1,4-dioxane (123-91-1)	

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.
Additional information : Handle empty containers with care because residual vapors are flammable. Hazardous waste due to potential risk of explosion.
Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN2810 Toxic, liquids, organic, n.o.s. (atrazine ; ; phenacetin), 6.1, III
UN-No.(DOT) : UN2810
Proper Shipping Name (DOT) : Toxic, liquids, organic, n.o.s.
atrazine ; ; phenacetin
Class (DOT) : 6.1 - Class 6.1 - Poisonous materials 49 CFR 173.132
Packing group (DOT) : III - Minor Danger

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Hazard labels (DOT) : 6.1 - Poison



DOT Packaging Non Bulk (49 CFR 173.xxx) : 203
 DOT Packaging Bulk (49 CFR 173.xxx) : 241
 DOT Special Provisions (49 CFR 172.102) : IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672).
 T7 - 4 178.274(d)(2) Normal..... 178.275(d)(3)
 TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / 1 + a (tr - tf)$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.
 TP28 - A portable tank having a minimum test pressure of 2.65 bar (265 kPa) may be used provided the calculated test pressure is 2.65 bar or less based on the MAWP of the hazardous material, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.
 DOT Packaging Exceptions (49 CFR 173.xxx) : 153
 DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 60 L
 DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 220 L
 DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.
 DOT Vessel Stowage Other : 40 - Stow "clear of living quarters"
 Emergency Response Guide (ERG) Number : 153
 Other information : No supplementary information available.

Transportation of Dangerous Goods

Not applicable

Transport by sea

Transport document description (IMDG) : UN 2810 TOXIC LIQUID, ORGANIC, N.O.S. (atrazine ; ethyl methacrylate ; phenacetin), 6.1, III
 UN-No. (IMDG) : 2810
 Proper Shipping Name (IMDG) : TOXIC LIQUID, ORGANIC, N.O.S.
 Class (IMDG) : 6.1 - Toxic substances
 Packing group (IMDG) : III - substances presenting low danger
 Limited quantities (IMDG) : 5 L

Air transport

Transport document description (IATA) : UN 2810 Toxic liquid, organic, n.o.s. (atrazine ; ; phenacetin), 6.1, III
 UN-No. (IATA) : 2810
 Proper Shipping Name (IATA) : Toxic liquid, organic, n.o.s.
 Class (IATA) : 6.1 - Toxic Substances
 Packing group (IATA) : III - Minor Danger

SECTION 15: Regulatory information

15.1. US Federal regulations

Contains chemical(s) subject to TSCA 12b export notification if product is shipped outside the U.S

ethyl methanesulfonate	CAS-No. 62-50-0	0.1%
phenacetin	CAS-No. 62-44-2	0.1%

Aramite (140-57-8)

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

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atrazine (1912-24-9)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
di-allate (2303-16-4)	
Not listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	100 lb
ethyl methacrylate (97-63-2)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Not subject to reporting requirements of the United States SARA Section 313	
CERCLA RQ	1000 lb
ethyl methanesulfonate (62-50-0)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Not subject to reporting requirements of the United States SARA Section 313	
EPA TSCA Regulatory Flag	S - S - indicates a substance that is identified in a final Significant New Use Rule.
CERCLA RQ	1 lb
chlordecone (143-50-0)	
Not listed on the United States TSCA (Toxic Substances Control Act) inventory Not subject to reporting requirements of the United States SARA Section 313	
CERCLA RQ	1 lb
methyl methanesulfonate (66-27-3)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
phenacetin (62-44-2)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Not subject to reporting requirements of the United States SARA Section 313	
EPA TSCA Regulatory Flag	S - S - indicates a substance that is identified in a final Significant New Use Rule.
CERCLA RQ	100 lb
propyzamide (23950-58-5)	
Not listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	5000 lb
safrole (94-59-7)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	100 lb
Methylene Chloride (75-09-2)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
Listed on EPA Hazardous Air Pollutant (HAPS)	
EPA TSCA Regulatory Flag	R - R - indicates a substance that is the subject of a TSCA section 6 risk management rule.
CERCLA RQ	1000 lb
pentachloroethane (76-01-7)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
EPA TSCA Regulatory Flag	S - S - indicates a substance that is identified in a final Significant New Use Rule.
CERCLA RQ	10 lb
1,4-dioxane (123-91-1)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
Listed on EPA Hazardous Air Pollutant (HAPS)	
CERCLA RQ	100 lb

15.2. International regulations

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Aramite (140-57-8)
Not listed on the Canadian DSL (Domestic Substances List)/NDSL (Non-Domestic Substances List)
atrazine (1912-24-9)
Listed on the Canadian DSL (Domestic Substances List)
di-allate (2303-16-4)
Not listed on the Canadian DSL (Domestic Substances List)/NDSL (Non-Domestic Substances List)
ethyl methacrylate (97-63-2)
Listed on the Canadian DSL (Domestic Substances List)
ethyl methanesulfonate (62-50-0)
Listed on the Canadian DSL (Domestic Substances List)
chlordecone (143-50-0)
Not listed on the Canadian DSL (Domestic Substances List)/NDSL (Non-Domestic Substances List)
methyl methanesulfonate (66-27-3)
Listed on the Canadian DSL (Domestic Substances List)
phenacetin (62-44-2)
Listed on the Canadian DSL (Domestic Substances List)
propyzamide (23950-58-5)
Not listed on the Canadian DSL (Domestic Substances List)/NDSL (Non-Domestic Substances List)
safrole (94-59-7)
Listed on the Canadian NDSL (Non-Domestic Substances List)
Methylene Chloride (75-09-2)
Listed on the Canadian DSL (Domestic Substances List)
pentachloroethane (76-01-7)
Listed on the Canadian DSL (Domestic Substances List)
1,4-dioxane (123-91-1)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

Aramite (140-57-8)
Listed on IARC (International Agency for Research on Cancer)
ethyl methanesulfonate (62-50-0)
Listed on IARC (International Agency for Research on Cancer) Listed as carcinogen on NTP (National Toxicology Program)
chlordecone (143-50-0)
Listed on IARC (International Agency for Research on Cancer) Listed as carcinogen on NTP (National Toxicology Program)
methyl methanesulfonate (66-27-3)
Listed on IARC (International Agency for Research on Cancer) Listed as carcinogen on NTP (National Toxicology Program)
phenacetin (62-44-2)
Listed on IARC (International Agency for Research on Cancer) Listed as carcinogen on NTP (National Toxicology Program)
safrole (94-59-7)
Listed on IARC (International Agency for Research on Cancer) Listed as carcinogen on NTP (National Toxicology Program)

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Methylene Chloride (75-09-2)					
Listed on IARC (International Agency for Research on Cancer)					
Listed as carcinogen on NTP (National Toxicology Program)					
Listed on EPA Hazardous Air Pollutant (HAPS)					

1,4-dioxane (123-91-1)					
Listed on IARC (International Agency for Research on Cancer)					
Listed as carcinogen on NTP (National Toxicology Program)					
Listed on EPA Hazardous Air Pollutant (HAPS)					

15.3. US State regulations

Aramite (140-57-8)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No	20 µg/day	

atrazine (1912-24-9)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
No	Yes	Yes	Yes		100 µg/day (oral)

ethyl methanesulfonate (62-50-0)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No		

chlordecone (143-50-0)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	Yes	No	No	0.04 µg/day	

methyl methanesulfonate (66-27-3)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No	7 µg/day	

phenacetin (62-44-2)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No	300 µg/day	

propyzamide (23950-58-5)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No		

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safrole (94-59-7)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No	3 µg/day	
Methylene Chloride (75-09-2)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No	50 µg/day	
1,4-dioxane (123-91-1)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No	30 µg/day	

SECTION 16: Other information

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : None.

Full text of H-phrases:

H225	Highly flammable liquid and vapor
H317	May cause an allergic skin reaction
H350	May cause cancer

Phenova US SDS REV

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