



Safety Data Sheet

HiTEC® 4139G Fuel Additive

SDS no. H4139G

Date of issue/Date of revision 11/2/2022

Section 1. Identification

GHS product identifier : HiTEC® 4139G Fuel Additive
Product use : Petrochemical industry: Fuel additive.

In case of emergency - Chemical

0800-70-77-022 (Brazil)
800-681-9531 (Mexico)
+1-703-527-3887 (International)
+1-703-741-5979 (Spanish language)
+1-800-424-9300 (US & Canada)

Manufacturer / Supplier

Afton Chemical Corporation
500 Spring St.
Richmond, VA 23219
USA

Afton Chemical Canada Corporation
5045 South Service Road
Suite 101
Burlington, ON L7L 5Y7
905-631-5470

Non-Emergency Telephone: +1-804-788-5800

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : FLAMMABLE LIQUIDS - Category 4
ACUTE TOXICITY (oral) - Category 4
ACUTE TOXICITY (dermal) - Category 4
ACUTE TOXICITY (inhalation) - Category 4
SKIN SENSITIZATION - Category 1
CARCINOGENICITY - Category 2

GHS label elements

Hazard pictograms



Signal word

: Warning

Hazard statements

: Combustible liquid.
Harmful if swallowed, in contact with skin or if inhaled.
May cause an allergic skin reaction.
Suspected of causing cancer.

Precautionary statements

Prevention

: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing and eye or face protection. Keep away from flames and hot surfaces. No smoking. Use only outdoors or in a well-ventilated area. Avoid breathing vapor. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace.

Section 2. Hazards identification

- Response** : IF exposed or concerned: Get medical advice or attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell. IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell. Rinse mouth. Take off contaminated clothing and wash it before reuse. Wash contaminated clothing before reuse. IF ON SKIN: Call a POISON CENTER or doctor if you feel unwell. Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or attention. In case of fire, use water spray (fog), foam, dry chemical or CO₂.
- Storage** : Store locked up. Store in a well-ventilated place. Keep cool.
- Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Additional hazards** : When heated above 100°C/212°F may undergo a self-accelerating, exothermic reaction which causes a rapid rise in temperature and pressure. Rupture of storage vessels and fire should be anticipated in case of such temperature.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	CAS number	Conc. (% w/w)	US GHS Classification
2-ethylhexyl nitrate	27247-96-7	≥75 - ≤85	FLAMMABLE LIQUIDS - Category 4
			ACUTE TOXICITY (oral) - Category 4
			ACUTE TOXICITY (dermal) - Category 4
			ACUTE TOXICITY (inhalation) - Category 4
Solvent naphtha (petroleum), heavy arom.	64742-94-5	≥5 - ≤5.8	FLAMMABLE LIQUIDS - Category 4
			SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
			ASPIRATION HAZARD - Category 1
Solvent naphtha (petroleum), light arom.	64742-95-6	≥1 - ≤1.6	FLAMMABLE LIQUIDS - Category 3
			SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
			SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
			ASPIRATION HAZARD - Category 1
1,2,4-trimethylbenzene	95-63-6	≥1 - ≤1.3	FLAMMABLE LIQUIDS - Category 3
			ACUTE TOXICITY (inhalation) - Category 4
			SKIN IRRITATION - Category 2
			EYE IRRITATION - Category 2A
			SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
			ASPIRATION HAZARD - Category 1
Solvent naphtha (petroleum), heavy arom.	64742-94-5	≥1 - ≤1.1	FLAMMABLE LIQUIDS - Category 4
			SPECIFIC TARGET ORGAN

Section 3. Composition/information on ingredients

naphthalene	91-20-3	≥0.5 - <1	TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1 FLAMMABLE SOLIDS - Category 2 ACUTE TOXICITY (oral) - Category 4 CARCINOGENICITY - Category 2 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 SKIN CORROSION - Category 1B SERIOUS EYE DAMAGE - Category 1 SKIN SENSITIZATION - Category 1
3,6,9-triazaundecamethylenediamine	112-57-2	≥0.1 - ≤0.3	

Any concentration shown as a range is to protect confidentiality or is due to batch variation. If specific chemical identify is withheld, it is to protect confidentiality.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact

: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation

: If inhaled, remove to fresh air. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. If not breathing, give artificial respiration. If breathing is difficult, administer oxygen.

Skin contact

: Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Get medical attention. If necessary, call a poison center or physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse. Continue to rinse for at least 15 minutes.

Ingestion

: Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact

: No known significant effects or critical hazards.

Inhalation

: Harmful if inhaled.

Section 4. First aid measures

Skin contact : Harmful in contact with skin. May cause an allergic skin reaction.

Ingestion : Harmful if swallowed.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : Adverse symptoms may include the following:
Inhalation of vapors may cause a sharp decrease in blood pressure with resulting loss of consciousness.

Skin contact : Adverse symptoms may include the following:
irritation
redness
Overexposure to organic nitrates by inhalation of vapor or skin contact may cause headache, dizziness, nausea, and decreased blood pressure.

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : In case of fire, use water spray (fog), foam, dry chemical or CO₂.

Unsuitable extinguishing media : Do not use water jet.

Specific hazards arising from the chemical : Combustible liquid. Risk of explosion if heated under confinement. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. Fight fire from protected location or maximum possible distance.

Do not fight fire when it reaches the material. Withdraw from fire and let it burn.

When heated above 100°C/212°F may undergo a self-accelerating, exothermic reaction which causes a rapid rise in temperature and pressure. Rupture of storage vessels and fire should be anticipated in case of such temperature. Spray storage vessels with water to maintain temperature below 100°C/212°F.

Section 5. Fire-fighting measures

- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous. Do not reuse container.

Do not heat the product.

Product Transfer: Prior to starting transfer pump, ensure all valves in the product discharge line are open and that the line is unobstructed. Immediately after starting the transfer pump, verify that the product is flowing. If product is not flowing, shut the pump off immediately. Operating the transfer pump in a dead-headed (blocked) condition without product flow can result in an explosion damaging equipment and causing personal injury. A pneumatic driven diaphragm pump or pumps of other designs

Section 7. Handling and storage

equipped with high temperature (75°C) shut-off devices are recommended when pumps are provided at fixed locations.

Refer to "Safety and Handling Manual for 2-Ethylhexyl Nitrate" for further information on safety and handling concerns and procedures (available from Afton Corporation).

Product Transfer : Do not heat the product. Prior to starting transfer pump, ensure all valves in the product discharge line are open and that the line is unobstructed. Immediately after starting the transfer pump, verify that the product is flowing. If product is not flowing, shut the pump off immediately. Operating the transfer pump in a dead-headed (blocked) condition without product flow can result in an explosion damaging equipment and causing personal injury. A pneumatic driven diaphragm pump or pumps of other designs equipped with high temperature (75 degs. C) shut-off devices are recommended when pumps are provided at fixed locations.

Advice on general occupational hygiene

: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities

: Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Do not heat the product. Warehouses equipped with fire suppression systems are recommended. This product should not be stored in the same area with tanks containing flammable liquids. Fire suppression systems should be adequate to keep product cool in the event of a fire. Refer to "Safety and Handling Manual for 2-Ethylhexyl Nitrate" for further information on safety and handling concerns and procedures (available from Afton Corporation).

Section 8. Exposure controls/personal protection

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
1,2,4-trimethylbenzene	ACGIH TLV (United States, 1/2022). TWA: 10 ppm 8 hours.
naphthalene	ACGIH TLV (United States, 1/2022). Absorbed through skin. TWA: 10 ppm 8 hours. TWA: 52 mg/m ³ 8 hours. OSHA PEL (United States, 5/2018). TWA: 10 ppm 8 hours. TWA: 50 mg/m ³ 8 hours.

Appropriate engineering controls

: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Section 8. Exposure controls/personal protection

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Hand Protection: Wear chemical resistant gloves. Nitrile gloves of minimum thickness 0.4 mm have an expected breakthrough time of 480 minutes or less when in frequent contact with the product. Due to variable exposure conditions the user must consider that the practical use of a chemical-protective glove in practice may be much shorter than the permeation time above. Manufacturer's directions for use, especially about the minimum thickness and the minimum breakthrough time, must be observed. This information does not replace suitability tests by the end user since glove protection varies depending on the conditions under which the product is used.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.

Color : Not available.

Odor : Not available.

Odor threshold : Not available.

pH : Not available.

Melting point : Not available.

Boiling point : Not available.

Flash point : Closed cup: 65°C (149°F) [Pensky-Martens Minimum]

Evaporation rate : Not available.

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Vapor density : Not available.

Density : 0.956 g/cm³

Relative density : 0.9576

Section 9. Physical and chemical properties

Solubility(ies)	: Not available.	
Partition coefficient: n-octanol/water	: Not applicable.	
Auto-ignition temperature	: Not available.	
Decomposition temperature	: Not available.	
Viscosity	: Kinematic (40°C (104°F)): 1.5 mm ² /s (1.5 cSt)	Minimum
Explosive properties	: Not available.	
Oxidizing properties	: Not available.	

Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: Unstable at temperatures greater than 100°C/212°F.
Possibility of hazardous reactions	: Hazardous reactions or instability may occur under certain conditions of storage or use. Conditions may include the following: heating under confinement Reactions may include the following: risk of explosion
Conditions to avoid	: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
Incompatible materials	: Reactive or incompatible with the following materials: oxidizing materials
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Test	Result	Species	Dose	Exposure	Remarks
2-ethylhexyl nitrate	None available.	LC50 Inhalation Vapor	Rat	>4.6 mg/l	1 hours	-
Solvent naphtha (petroleum), heavy arom.	None available.	LD50 Dermal	Rabbit	>4800 mg/kg	-	-
	None available.	LD50 Oral	Rat	>9600 mg/kg	-	-
	403 Acute Inhalation Toxicity	LC50 Inhalation Dusts and mists	Rat	>4778 mg/m ³	4 hours	Based on data for a similar substance.
	403 Acute Inhalation Toxicity	LC50 Inhalation Vapor	Rat	>4688 mg/m ³	4 hours	-
	402 Acute Dermal Toxicity	LD50 Dermal	Rabbit	>2000 mg/kg	-	Based on data for a similar substance.
Solvent naphtha (petroleum), light arom.	401 Acute Oral Toxicity	LD50 Oral	Rat	6318 mg/kg	-	-
	403 Acute Inhalation Toxicity	LC50 Inhalation Vapor	Rat	>6193 mg/m ³	4 hours	-
	402 Acute Dermal Toxicity	LD50 Dermal	Rabbit	>3160 mg/kg	-	-
	None available.	LD50 Oral	Rat - Female	3492 mg/kg	-	-

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1,2,4-trimethylbenzene	None available.	LD50 Oral	Rat - Male	6984 mg/kg	-	-
	None available.	LC50 Inhalation Vapor	Rat	>10200 mg/m ³	4 hours	Based on data for a similar substance.
	None available.	LD50 Dermal	Rat	>3440 mg/kg	-	Based on data for a similar substance.
Solvent naphtha (petroleum), heavy arom.	None available.	LD50 Oral	Rat	6000 mg/kg	-	-
	403 Acute Inhalation Toxicity	LC50 Inhalation Dusts and mists	Rat	>4778 mg/m ³	4 hours	Based on data for a similar substance.
	403 Acute Inhalation Toxicity	LC50 Inhalation Vapor	Rat	>4688 mg/m ³	4 hours	Based on data for a similar substance.
	402 Acute Dermal Toxicity	LD50 Dermal	Rabbit	>2000 mg/kg	-	Based on data for a similar substance.
	401 Acute Oral Toxicity	LD50 Oral	Rat	6318 mg/kg	-	Based on data for a similar substance.
naphthalene	403 Acute Inhalation Toxicity	LC50 Inhalation Vapor	Rat	>0.4 mg/l	4 hours	No effects at saturation.
	402 Acute Dermal Toxicity	LD50 Dermal	Rat	>16000 mg/kg	-	-
	401 Acute Oral Toxicity	LD50 Oral	Mouse	533 mg/kg	-	-
Tetraethylenepentamine	None available.	LD50 Dermal	Rabbit	1260 mg/kg	-	-
	None available.	LD50 Oral	Rat	1716 mg/kg	-	-

Conclusion/Summary : Harmful if swallowed, in contact with skin or if inhaled.

Irritation/Corrosion

Product/ingredient name	Test	Species	Result	Remarks
2-ethylhexyl nitrate	405 Acute Eye Irritation/Corrosion	Rabbit	Eyes - Not an Irritant	-
	404 Acute Dermal Irritation/Corrosion	Rabbit	Skin - Not an Irritant	-
Solvent naphtha (petroleum), heavy arom.	405 Acute Eye Irritation/Corrosion	Rabbit	Eyes - Not an Irritant	-
	404 Acute Dermal Irritation/Corrosion	Rabbit	Skin - Not an Irritant	Based on data for a similar substance.
	404 Acute Dermal Irritation/Corrosion	Rabbit	Skin - Not an Irritant	-
Solvent naphtha (petroleum), light arom.	405 Acute Eye Irritation/Corrosion	Rabbit	Eyes - Not an Irritant	-
	None available.	Rabbit	Skin - Mild irritant	-
1,2,4-trimethylbenzene	None available.	Rabbit	Skin - Irritant	Based on data for a similar substance.
Solvent naphtha (petroleum), heavy arom.	405 Acute Eye Irritation/Corrosion	Rabbit	Eyes - Not an Irritant	Based on data for a similar substance.
	404 Acute Dermal Irritation/Corrosion	Rabbit	Skin - Not an Irritant	Based on data for a similar substance.
naphthalene	None available.	Rabbit	Eyes - Not an Irritant	-
	None available.	Rabbit	Skin - Not an Irritant	-
Tetraethylenepentamine	405 Acute Eye Irritation/Corrosion	Rabbit	Eyes - Visible necrosis	Based on data for a similar substance.
	404 Acute Dermal Irritation/Corrosion	Rabbit	Skin - Visible necrosis	Based on data for a similar substance.

Conclusion/Summary

Skin : Not available.

Section 11. Toxicological information

Eyes : Not available.

Respiratory : Not available.

Sensitization

Product/ingredient name	Test	Route of exposure	Species	Result	Remarks
2-ethylhexyl nitrate	406 Skin Sensitization	skin	Guinea pig	Not sensitizing	-
Solvent naphtha (petroleum), heavy arom.	406 Skin Sensitization	skin	Guinea pig	Not sensitizing	Based on data for a similar substance.
Solvent naphtha (petroleum), light arom.	406 Skin Sensitization	skin	Guinea pig	Not sensitizing	-
1,2,4-trimethylbenzene	406 Skin Sensitization	skin	Guinea pig	Not sensitizing	Based on data for a similar substance.
Solvent naphtha (petroleum), heavy arom.	406 Skin Sensitization	skin	Guinea pig	Not sensitizing	Based on data for a similar substance.
naphthalene	406 Skin Sensitization	skin	Guinea pig	Not sensitizing	-
Tetraethylenepentamine	None available.	skin	Guinea pig	Sensitizing	-

Conclusion/Summary

Skin : Not available.

Respiratory : Not available.

Mutagenicity

Product/ingredient name	Test	Experiment	Result	Remarks
2-ethylhexyl nitrate	471 Bacterial Reverse Mutation Test	Experiment: In vitro Subject: Bacteria	Negative	-
	476 <i>In vitro</i> Mammalian Cell Gene Mutation Test	Experiment: In vitro Subject: Mammalian-Animal	Negative	-
	473 <i>In vitro</i> Mammalian Chromosomal Aberration Test	Experiment: In vitro Subject: Mammalian-Human	Negative	-
Solvent naphtha (petroleum), heavy arom.	471 Bacterial Reverse Mutation Test	Experiment: In vitro Subject: Bacteria	Negative	-
	473 <i>In vitro</i> Mammalian Chromosomal Aberration Test	Experiment: In vitro Subject: Mammalian-Animal	Negative	Based on data for a similar substance.
	474 Mammalian Erythrocyte Micronucleus Test	Experiment: In vivo Subject: Mammalian-Animal	Negative	-
	475 Mammalian Bone Marrow Chromosomal Aberration Test	Experiment: In vivo Subject: Mammalian-Animal	Negative	Based on data for a similar substance.
Solvent naphtha (petroleum), light arom.	471 Bacterial Reverse Mutation Test	Experiment: In vitro Subject: Bacteria	Negative	-
	476 <i>In vitro</i> Mammalian Cell Gene Mutation Test	Experiment: In vitro Subject: Mammalian-Animal	Negative	-
1,2,4-trimethylbenzene	471 Bacterial Reverse Mutation Test	Experiment: In vitro Subject: Bacteria	Negative	-
	476 <i>In vitro</i> Mammalian Cell Gene Mutation Test	Experiment: In vitro Subject: Mammalian-Animal	Negative	Based on data for a similar substance.
Solvent naphtha (petroleum), heavy arom.	471 Bacterial Reverse Mutation Test	Experiment: In vitro Subject: Bacteria	Negative	Based on data for a similar substance.
	473 <i>In vitro</i> Mammalian Chromosomal Aberration Test	Experiment: In vitro Subject: Mammalian-Animal	Negative	Based on data for a similar substance.
	475 Mammalian Bone Marrow Chromosomal Aberration Test	Experiment: In vivo Subject: Mammalian-Animal	Negative	Based on data for a similar substance.
	474 Mammalian	Experiment: In vivo	Negative	Based on data for a

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naphthalene	Erythrocyte Micronucleus Test 473 <i>In vitro</i> Mammalian Chromosomal Aberration Test 471 Bacterial Reverse Mutation Test 479 Genetic Toxicology: <i>In vitro</i> Sister Chromatid Exchange Assay in Mammalian Cells None available.	Subject: Mammalian-Animal Experiment: In vitro Subject: Mammalian-Animal Experiment: In vitro Subject: Bacteria Experiment: In vitro Subject: Mammalian-Animal Experiment: In vitro Subject: Mammalian-Human Experiment: In vivo Subject: Mammalian-Animal	Positive Negative Negative Negative Negative	similar substance. WOE does not support classification - - - -
Tetraethylenepentamine	486 Unscheduled DNA Synthesis (UDS) Test with Mammalian Liver Cells <i>in vivo</i> 471 Bacterial Reverse Mutation Test 476 <i>In vitro</i> Mammalian Cell Gene Mutation Test 487 <i>In vitro</i> Micronucleus Test 474 Mammalian Erythrocyte Micronucleus Test	Experiment: In vitro Subject: Bacteria Experiment: In vitro Subject: Mammalian-Animal Experiment: In vitro Subject: Mammalian-Human Experiment: In vivo Subject: Mammalian-Animal	Positive Positive Negative Negative	WOE does not support classification Based on data for a similar substance. - Based on data for a similar substance.

Conclusion/Summary : Not available.

Carcinogenicity

Product/ingredient name	Test	Species	Exposure	Result	Remarks
Solvent naphtha (petroleum), light arom.	451 Carcinogenicity Studies	Rat	113 months; 5 days per week	Negative - Inhalation - NOAEL	-
naphthalene	None available.	Rat	105 weeks; 5 days per week	Positive - Inhalation - NOAEL	-

Conclusion/Summary : Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
naphthalene	-	2B	Reasonably anticipated to be a human carcinogen.

Reproductive toxicity

Product/ingredient name	Test	Route of exposure	Species	Maternal toxicity	Fertility	Development toxin	Remarks
2-ethylhexyl nitrate	421 Reproduction/Developmental Toxicity Screening Test	Oral	Rat	Positive	Negative	Negative	-
Solvent naphtha (petroleum), heavy arom.	416 Two-Generation Reproduction Toxicity Study	Inhalation	Rat	Positive	Negative	Positive	Based on data for a similar substance. WOE does not support classification
Solvent naphtha (petroleum), light arom.	None available.	Inhalation	Rat	Negative	Negative	Negative	-

Section 11. Toxicological information

1,2,4-trimethylbenzene	416 Two-Generation Reproduction Toxicity Study	Inhalation	Rat	Positive	Negative	Negative	Based on data for a similar substance.
Solvent naphtha (petroleum), heavy arom.	416 Two-Generation Reproduction Toxicity Study	Inhalation	Rat	Positive	Negative	Positive	Based on data for a similar substance. WOE does not support classification

Conclusion/Summary : Not available.

Teratogenicity

Product/ingredient name	Test	Species	Result	Remarks
2-ethylhexyl nitrate	414 Prenatal Developmental Toxicity Study None available.	Rat Rat	Negative - Inhalation Negative - Oral	Based on data for a similar substance. Based on data for a similar substance.
	None available.	Rat	Negative - Oral	Based on data for a similar substance.
Solvent naphtha (petroleum), heavy arom.	414 Prenatal Developmental Toxicity Study	Rat	Negative - Oral	Based on data for a similar substance.
Solvent naphtha (petroleum), light arom.	None available.	Rabbit	Negative - Inhalation	Based on data for a similar substance.
	None available.	Rat	Negative - Inhalation	Based on data for a similar substance.
1,2,4-trimethylbenzene	414 Prenatal Developmental Toxicity Study	Rat	Negative - Inhalation	-
Solvent naphtha (petroleum), heavy arom.	414 Prenatal Developmental Toxicity Study	Rat	Negative - Oral	Based on data for a similar substance.
naphthalene	414 Prenatal Developmental Toxicity Study	Rat	Negative - Oral	-
Tetraethylenepentamine	414 Prenatal Developmental Toxicity Study	Rabbit	Negative - Dermal	Based on data for a similar substance.
	414 Prenatal Developmental Toxicity Study	Rat	Negative - Oral	Based on data for a similar substance.
	414 Prenatal Developmental Toxicity Study	Rat	Negative - Oral	Based on data for a similar substance.

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Solvent naphtha (petroleum), heavy arom.	Category 3	-	Narcotic effects
Solvent naphtha (petroleum), light arom.	Category 3	-	Respiratory tract irritation
1,2,4-trimethylbenzene	Category 3	-	Narcotic effects
	Category 3	-	Respiratory tract irritation
Solvent naphtha (petroleum), heavy arom.	Category 3	-	Narcotic effects

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

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Name	Result
Solvent naphtha (petroleum), heavy arom.	ASPIRATION HAZARD - Category 1
Solvent naphtha (petroleum), light arom.	ASPIRATION HAZARD - Category 1
1,2,4-trimethylbenzene	ASPIRATION HAZARD - Category 1
Solvent naphtha (petroleum), heavy arom.	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Skin, Eyes, Ingestion, and Inhalation

Potential acute health effects

Eye contact : No known significant effects or critical hazards.
Inhalation : Harmful if inhaled.
Skin contact : Harmful in contact with skin. May cause an allergic skin reaction.
Ingestion : Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.
Inhalation : Adverse symptoms may include the following:
Inhalation of vapors may cause a sharp decrease in blood pressure with resulting loss of consciousness.
Skin contact : Adverse symptoms may include the following:
irritation
redness
Overexposure to organic nitrates by inhalation of vapor or skin contact may cause headache, dizziness, nausea, and decreased blood pressure.
Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.
Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.
Potential delayed effects : Not available.

Potential chronic health effects

Product/ingredient name	Test	Species	Dose	Exposure	Result	Remarks
2-ethylhexyl nitrate Solvent naphtha (petroleum), heavy arom.	None available.	Rabbit	500 mg/kg	-	Sub-acute NOAEL Dermal	-
	413 Subchronic Inhalation Toxicity: 90-day Study	Rat	863 mg/m ³	90 days	Sub-chronic NOAEL Inhalation Vapor	Based on data for a similar substance.
	408 Repeated Dose 90-Day Oral Toxicity Study in Rodents	Rat	300 mg/kg	-	Sub-chronic NOAEL Oral	Based on data for a similar substance.
	452 Chronic Toxicity Studies	Rat	900 mg/m ³	12 months	Chronic NOAEL Inhalation Vapor	Based on data for a similar substance.
	413 Subchronic Inhalation Toxicity: 90-day Study	Rat	0.38 mg/l	13 weeks	Sub-chronic NOAEL Inhalation Vapor	-

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Solvent naphtha (petroleum), light arom.	None available.	Rat	353 ppm	13 weeks; 6 hours per day	Sub-chronic LOAEL Inhalation Vapor	-
	408 Repeated Dose 90-Day Oral Toxicity Study in Rodents	Rat	600 mg/kg	-	Sub-chronic NOAEL Oral	Based on data for a similar substance.
	452 Chronic Toxicity Studies	Rat	900 mg/m ³	12 months; 6 hours per day	Chronic NOAEL Inhalation Vapor	-
1,2,4-trimethylbenzene	408 Repeated Dose 90-Day Oral Toxicity Study in Rodents	Rat	600 mg/kg	-	Sub-chronic NOAEL Oral	Based on data for a similar substance.
	452 Chronic Toxicity Studies	Rat	1800 mg/m ³	12 months	Chronic NOAEL Inhalation Vapor	Based on data for a similar substance.
Solvent naphtha (petroleum), heavy arom.	408 Repeated Dose 90-Day Oral Toxicity Study in Rodents	Rat	300 mg/kg	-	Sub-chronic NOAEL Oral	Based on data for a similar substance.
	452 Chronic Toxicity Studies	Rat	900 mg/m ³	12 months	Chronic NOAEL Inhalation Vapor	Based on data for a similar substance.
	413 Subchronic Inhalation Toxicity: 90-day Study	Rat	0.38 mg/l	13 weeks	Sub-chronic NOAEL Inhalation Vapor	Based on data for a similar substance.
naphthalene	413 Subchronic Inhalation Toxicity: 90-day Study	Rat	0.011 mg/l	13 weeks	Sub-chronic LOAEL Inhalation Vapor	-
	411 Subchronic Dermal Toxicity: 90-day Study	Rat	1000 mg/kg	-	Sub-chronic NOAEL Dermal	-
	408 Repeated Dose 90-Day Oral Toxicity Study in Rodents	Rat	200 mg/kg	-	Sub-chronic NOAEL Oral	-
	None available.	Rat	1 ppm	90 days	Sub-chronic NOAEL Inhalation Vapor	-
Tetraethylenepentamine	408 Repeated Dose 90-Day Oral Toxicity Study in Rodents	Rat	50 mg/kg	-	Sub-chronic LOAEL Oral	Based on data for a similar substance.
	410 Repeated Dose Dermal Toxicity: 21/28-day Study	Rabbit	50 mg/kg	-	Sub-acute NOAEL Dermal	-
	410 Repeated Dose Dermal Toxicity: 21/28-day Study	Rabbit	200 mg/kg	-	Sub-acute NOAEL Dermal	-
	408 Repeated Dose 90-Day Oral Toxicity Study in Rodents	Rat	270 mg/kg	-	Sub-chronic NOAEL Oral	Based on data for a similar substance.

Conclusion/Summary

: Not available.

General

: Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity

: Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity

: No known significant effects or critical hazards.

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Teratogenicity	: No known significant effects or critical hazards.
Developmental effects	: No known significant effects or critical hazards.
Fertility effects	: No known significant effects or critical hazards.

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Toxicity

Product/ingredient name	Result	Species	Exposure	Remarks
2-ethylhexyl nitrate	Acute EC50 >2.53 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours	-
	Acute EC50 0.83 mg/l	Daphnia - Daphnia magna	48 hours	-
	Acute EL50 >1000 mg/l	Micro-organism	3 hours	-
	Acute LC50 2 mg/l	Fish - Danio rerio	96 hours	-
	Chronic EC10 2.22 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours	-
Solvent naphtha (petroleum), heavy arom.	Acute EL50 >1 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours	-
	Acute EL50 1.4 mg/l	Daphnia - Daphnia magna	48 hours	Based on data for a similar substance.
	Acute LL50 2 to 5 mg/l	Fish - Oncorhynchus mykiss	96 hours	-
	Chronic NOEL 1 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours	-
	Chronic NOEL 0.48 mg/l	Daphnia - Daphnia magna	21 days	Based on data for a similar substance.
Solvent naphtha (petroleum), light arom.	Acute EL50 3.1 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours	-
	Acute EL50 4.5 mg/l	Daphnia - Daphnia magna	48 hours	Based on data for a similar substance.
	Acute LL50 8.2 mg/l	Fish - Pimephales promelas	96 hours	Based on data for a similar substance.
	Chronic NOEC 0.4 mg/l	Daphnia - Daphnia magna	21 days	Based on data for a similar substance.
	Chronic NOEL 0.5 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours	-
	Chronic NOEL 2.6 mg/l	Fish - Pimephales promelas	14 days	Based on data for a similar substance.
1,2,4-trimethylbenzene	Acute LC50 3.6 mg/l	Daphnia - Daphnia magna	48 hours	-
	Acute LC50 7.72 mg/l	Fish - Pimephales promelas	96 hours	-
Solvent naphtha (petroleum), heavy arom.	Acute EL50 >1 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours	-
	Acute EL50 1.4 mg/l	Daphnia - Daphnia magna	48 hours	Based on data for a similar substance.
	Acute LL50 2 to 5 mg/l	Fish - Oncorhynchus mykiss	96 hours	-
	Chronic NOEL 1 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours	-
	Chronic NOEL 0.48 mg/l	Daphnia - Daphnia magna	21 days	Based on data for a similar

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naphthalene	Acute EC50 2.96 mg/l	Algae - Pseudokirchneriella subcapitata	96 hours	substance. -
	Acute EC50 2.16 mg/l	Daphnia - Daphnia magna	48 hours	-
	Acute LC50 1.6 mg/l	Fish - Oncorhynchus mykiss	96 hours	-
	Chronic NOEC 0.59 mg/l	Daphnia - Daphnia pulex	125 days	-
	Chronic NOEC 0.12 mg/l	Fish - Oncorhynchus gorboscha	40 days	-
Tetraethylenepentamine	Acute EC50 6.8 mg/l	Algae - Selenastrum capricornutum	72 hours	-
	Acute EC50 1600 mg/l	Micro-organism	60 minutes	-
	Acute LC50 14.6 mg/l	Daphnia - Daphnia magna	48 hours	-
	Acute LC50 310 mg/l	Fish - Pimephales promelas	96 hours	-
	Chronic NOEC 0.5 mg/l	Algae - Selenastrum capricornutum	72 hours	-

Conclusion/Summary : Very toxic to aquatic life with long lasting effects.

Persistence and degradability

Product/ingredient name	Test	Result	Remarks
2-ethylhexyl nitrate	OECD 310 Ready Biodegradability - CO ₂ in Sealed Vessels (Headspace Test)	0 % - Not readily - 28 days	-
Solvent naphtha (petroleum), heavy arom.	OECD 301F Ready Biodegradability - Manometric Respirometry Test	58.6 % - Inherent - 28 days	Based on data for a similar substance.
Solvent naphtha (petroleum), heavy arom.	OECD 301F Ready Biodegradability - Manometric Respirometry Test	58.6 % - Inherent - 28 days	Based on data for a similar substance.
naphthalene	OECD 302C Inherent Biodegradability: Modified MITI Test (II)	0 to 2 % - Not readily - 28 days	-
Tetraethylenepentamine	OECD 301D Ready Biodegradability - Closed Bottle Test	0 % - Not readily - 28 days	-

Bioaccumulative potential

Section 12. Ecological information








Product/ingredient name	LogP _{ow}	BCF	Potential
2-ethylhexyl nitrate	5.24	1196	high
Solvent naphtha (petroleum), heavy arom.	2.8 to 6.5	99 to 5780	high
Solvent naphtha (petroleum), light arom.	-	10 to 2500	high
1,2,4-trimethylbenzene	3.63	243	low
Solvent naphtha (petroleum), heavy arom.	2.8 to 6.5	99 to 5780	high
naphthalene	3.4	36.5 to 168	low

Section 13. Disposal considerations

Disposal methods

: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	IMDG	IATA
UN number	NA1993	UN3082	UN3082	UN3082
UN proper shipping name	Combustible liquid, n. o.s. (2-ethylhexyl nitrate, Solvent naphtha). Marine pollutant	Environmentally hazardous substance, liquid, n.o.s. (2-ethylhexyl nitrate, Solvent naphtha). Marine pollutant	Environmentally hazardous substance, liquid, n.o.s. (2-ethylhexyl nitrate, Solvent naphtha). Marine pollutant	Environmentally hazardous substance, liquid, n.o.s. (2-ethylhexyl nitrate, Solvent naphtha)
Transport hazard class(es)	Combustible liquid. 	9  	9  	9  
Packing group	III	III	III	III
Environmental hazards	Yes.	Yes.	Yes.	Yes.

Additional information

DOT : Marine pollutant : 2-ethylhexyl nitrate

NAERG : 171

Special precautions for user : Do not heat the product.

Transport in bulk according to IMO instruments : Not available.

to IMO instruments

:

Section 14. Transport information

Notice to reader

The above transport information is provided to assist in the proper classification of this product and may not be suitable for all shipping conditions.

Section 15. Regulatory information

U.S. Federal regulations

United States - TSCA Section 5

TSCA 5(a)2 final significant new use rules

Polyalkenyl, N,N'-bistriazole

P-09-0486

40 CFR 721.10576

TSCA 5(a)2 proposed significant new use rules

None of the components are listed.

TSCA 5(e) substance consent order

Alkenyl succinimide

P-08-0069

-

United States - TSCA Section 6

TSCA 6 final risk management

None of the components are listed.

United States - TSCA 12(b) - Chemical export notification

Name on list

Alkenyl succinimide

Polyalkenyl, N,N'-bistriazole

Status

One time notification

One time notification

Ref. number

P-08-0069

P-09-0486

SARA 302/304

Composition/information on ingredients

Name	%	EHS	SARA 302 TPQ		SARA 304 RQ	
			(lbs)	(gallons)	(lbs)	(gallons)
nitric acid	≤0.01	Yes.	1000	85.7	1000	85.7

SARA 304 RQ : 24405125.1 lbs / 11079926.8 kg [3061722.8 gal / 11589881.6 L]

CERCLA : CERCLA: Hazardous substances.: naphthalene: 100 lbs. (45.4 kg); benzene: 10 lbs. (4.54 kg); biphenyl: 100 lbs. (45.4 kg); ethylbenzene: 1000 lbs. (454 kg); xylene: 100 lbs. (45.4 kg); cumene: 5000 lbs. (2270 kg); nitric acid: 1000 lbs. (454 kg);

SARA 311/312

Classification : FLAMMABLE LIQUIDS - Category 4
ACUTE TOXICITY (oral) - Category 4
ACUTE TOXICITY (dermal) - Category 4
ACUTE TOXICITY (inhalation) - Category 4
SKIN SENSITIZATION - Category 1
CARCINOGENICITY - Category 2
HNOC - Risk of explosion if heated under confinement.

Composition/information on ingredients

Name	%	Classification
2-ethylhexyl nitrate	≥75 - ≤85	FLAMMABLE LIQUIDS - Category 4 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 HNOC - Risk of explosion if heated under confinement.
Solvent naphtha (petroleum), heavy arom.	≥5 - ≤5.8	FLAMMABLE LIQUIDS - Category 4 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
Solvent naphtha (petroleum), light arom.	≥1 - ≤1.6	ASPIRATION HAZARD - Category 1 FLAMMABLE LIQUIDS - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE)

Section 15. Regulatory information

1,2,4-trimethylbenzene	≥1 - ≤1.3	(Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1 HNOC - Static-accumulating flammable liquid FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY (inhalation) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 ASPIRATION HAZARD - Category 1 FLAMMABLE LIQUIDS - Category 4 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1 FLAMMABLE SOLIDS - Category 2 ACUTE TOXICITY (oral) - Category 4 CARCINOGENICITY - Category 2 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 SKIN CORROSION - Category 1B SERIOUS EYE DAMAGE - Category 1 SKIN SENSITIZATION - Category 1
Solvent naphtha (petroleum), heavy arom.	≥1 - ≤1.1	
naphthalene	≥0.5 - <1	
Tetraethylenepentamine	≥0.1 - ≤0.3	

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	1,2,4-trimethylbenzene	95-63-6	≥1 - ≤1.3
	naphthalene	91-20-3	≥0.5 - <1

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State - California Prop. 65

⚠ WARNING: This product contains a chemical known to the State of California to cause cancer.

WARNING: This product contains less than 1% of a chemical known to the State of California to cause birth defects or other reproductive harm.

Ingredient name	%	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
Naphthalene	≥0.5 - <1	Yes.	No.	Yes.	-
cumene	<0.1	Yes.	No.	-	-
Benzene	≤0.01	Yes.	Yes.	Yes.	Yes.
Ethylbenzene	≤0.01	Yes.	No.	Yes.	-

www.P65Warnings.ca.gov.

Canadian regulations

Canada Significant New Activity Notice : Polyalkenyl, N,N'-bistriazole

Canada - Canadian significant new activity notice substances

Canadian NPRI : The following components are listed: heavy aromatic solvent naphtha; light aromatic solvent naphtha; 1,2,4-trimethylbenzene; heavy aromatic solvent naphtha

CEPA Toxic substances : None of the components are listed.

International Inventory Status

Australia : All components are listed or exempted.

Canada : All components are listed or exempted.

China : At least one component is not listed.

Notified. Please contact your supplier for information on the inventory status of this material.

Section 15. Regulatory information

Europe	: For information on compliance with this regulation please contact your Afton representative (EHS.CustomerVolumes@AftonChemical.com).
Japan	: At least one component is not listed.
Republic of Korea	: At least one component is not listed. Notified. Please contact your supplier for information on the inventory status of this material.
New Zealand	: All components are listed or exempted.
Philippines	: All components are listed or exempted.
Switzerland	: For information on compliance with this regulation please contact your Afton representative (EHS.CustomerVolumes@AftonChemical.com).
Turkey	: For information on compliance with this regulation please contact your Afton representative (EHS.CustomerVolumes@AftonChemical.com).
Taiwan	: All components are listed or exempted.
United Kingdom (UK)	: For information on compliance with this regulation please contact your Afton representative (EHS.CustomerVolumes@AftonChemical.com).
United States Active	: All components are active or exempted.

Section 16. Other information

History

Date of issue/Date of revision : 11/2/2022

Prepared by : EHS Department (Tel: +1 804 788 5800)

Key to abbreviations

: ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations
WOE = Weight of Evidence

▀ Indicates information that has changed from previously issued version.

Notice to reader

This information and these recommendations are offered in good faith and believed to be correct as of the date hereof. Information and recommendations are supplied upon the condition that the recipients will make their own decision as to safety and suitability for their purposes. No representations or warranties, either expressed or implied, of merchantability, fitness for a particular purpose, or of any other nature, are made with respect to the product or the information and recommendations. Afton makes no representation as to completeness or accuracy. In no event will Afton be responsible for damages of any nature whatsoever resulting from the use or reliance upon the information and recommendations.