



# Safety Data Sheet

HiTEC® 6406 Fuel Additive

SDS no. H6406

Date of issue/Date of revision 7/21/2021

## Section 1. Identification

**GHS product identifier** : HiTEC® 6406 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

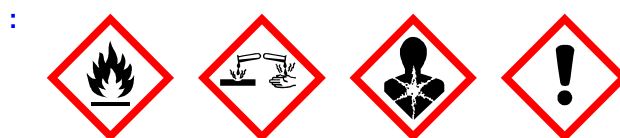
## Section 2. Hazards identification

**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 3  
SKIN IRRITATION - Category 2  
SERIOUS EYE DAMAGE - Category 1  
CARCINOGENICITY - Category 2  
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

### GHS label elements

#### Hazard pictograms



#### Signal word

: Danger

#### Hazard statements

: Flammable liquid and vapor.  
May be fatal if swallowed and enters airways.  
Causes skin irritation.  
Causes serious eye damage.  
May cause respiratory irritation.  
May cause drowsiness or dizziness.  
Suspected of causing cancer.

## Section 2. Hazards identification

### 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 heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating or lighting equipment. Use non-sparking tools. Take action to prevent static discharges. Use only outdoors or in a well-ventilated area. Avoid breathing vapor. Wash thoroughly after handling.

#### 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: Immediately call a POISON CENTER or doctor. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF ON SKIN: Wash with plenty of water. If skin irritation occurs: Get medical advice or attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor. In case of fire, use water spray (fog), foam, dry chemical or CO<sub>2</sub>.

#### Storage

: Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool.

#### Disposal

: Dispose of contents and container in accordance with all local, regional, national and international regulations.

### Additional hazards

: None known.

## Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	CAS number	Conc. (% w/w)	US GHS Classification
Solvent naphtha (petroleum), light arom.	64742-95-6	≥35 - ≤45	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
Monoalkylaryl alkoxyate aminated	EPA ACCN 270032	≥35 - ≤45	SKIN IRRITATION - Category 2 SERIOUS EYE DAMAGE - Category 1
1,2,4-trimethylbenzene	95-63-6	≥10 - ≤15	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
mesitylene	108-67-8	≥5 - ≤10	FLAMMABLE LIQUIDS - Category 3 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) -

## Section 3. Composition/information on ingredients

Monoalkylaryl alkoxylate	Proprietary	$\geq 1 - \leq 3$	Category 3 ASPIRATION HAZARD - Category 1
1,2,3-trimethylbenzene	526-73-8	$\geq 1 - \leq 3$	SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A FLAMMABLE LIQUIDS - Category 3
cumene	98-82-8	$\geq 0.5 - < 1$	SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 FLAMMABLE LIQUIDS - Category 3 CARCINOGENICITY - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 ASPIRATION HAZARD - Category 1

Proprietary HMIRA registration number:03411323. Filing date: 13/5/2021.

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

- : Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician.

#### Inhalation

- : Get medical attention immediately. Call a poison center or physician. 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. 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

- : Get medical attention immediately. Call a poison center or physician. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse. Continue to rinse for at least 15 minutes.

#### Ingestion

- : Get medical attention immediately. Call a poison center or physician. 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. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a 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.

## Section 4. First aid measures

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

- |                     |   |
|---------------------|---|
| <b>Eye contact</b>  | : Causes serious eye damage.  |
| <b>Inhalation</b>   | : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation. |
| <b>Skin contact</b> | : Causes skin irritation.   |
| <b>Ingestion</b>    | : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.                        |

#### Over-exposure signs/symptoms

- |                     |   |
|---------------------|---|
| <b>Eye contact</b>  | : Adverse symptoms may include the following:<br>pain<br>watering<br>redness  |
| <b>Inhalation</b>   | : Adverse symptoms may include the following:<br>respiratory tract irritation<br>coughing<br>nausea or vomiting<br>headache<br>drowsiness/fatigue<br>dizziness/vertigo<br>unconsciousness |
| <b>Skin contact</b> | : Adverse symptoms may include the following:<br>pain or irritation<br>redness<br>blistering may occur  |
| <b>Ingestion</b>    | : Adverse symptoms may include the following:<br>stomach pains<br>nausea or vomiting  |

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

- |                                   |   |
|-----------------------------------|---|
| <b>Notes to physician</b>         | : 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.   |
| <b>Specific treatments</b>        | : No specific treatment.  |
| <b>Protection of first-aiders</b> | : 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

- |                                       |   |
|---------------------------------------|---|
| <b>Suitable extinguishing media</b>   | : In case of fire, use water spray (fog), foam, dry chemical or CO <sub>2</sub> . |
| <b>Unsuitable extinguishing media</b> | : Do not use water jet.   |

### Specific hazards arising from the chemical

- |   |
|---|
| : Flammable liquid and vapor. 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. |
|---|

## Section 5. Fire-fighting measures

- 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.
- 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. Do not breathe 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). 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 breathe vapor or mist. Do not swallow. 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. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

## Section 7. Handling and storage

### 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.

## 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	<b>ACGIH TLV (United States, 3/2020).</b> TWA: 25 ppm 8 hours. TWA: 123 mg/m <sup>3</sup> 8 hours.
mesitylene	<b>ACGIH TLV (United States, 3/2020).</b> TWA: 25 ppm 8 hours. TWA: 123 mg/m <sup>3</sup> 8 hours.
1,2,3-trimethylbenzene	<b>ACGIH TLV (United States, 3/2020).</b> TWA: 25 ppm 8 hours. TWA: 123 mg/m <sup>3</sup> 8 hours.
cumene	<b>ACGIH TLV (United States, 3/2020).</b> TWA: 50 ppm 8 hours. <b>OSHA PEL (United States, 5/2018).</b> <b>Absorbed through skin.</b> TWA: 50 ppm 8 hours. TWA: 245 mg/m <sup>3</sup> 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.

### 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. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.



## Section 8. Exposure controls/personal protection

- 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: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- 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. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
- 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** : Colorless to light yellow.
- Odor** : Amine-like.
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point** : Not available.
- Boiling point** : Not available.
- Flash point** : Closed cup: 44°C (111.2°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** : 0.933 g/cm<sup>3</sup>
- Relative density** : 0.934
- Solubility** : Not available.
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Viscosity** : Kinematic (40°C (104°F)): 0.07 cm<sup>2</sup>/s (7 cSt)  
Not available.
- Explosive properties** : Not available.
- Oxidizing properties** : Not available.

## Section 10. Stability and reactivity

<b>Reactivity</b>	: No specific test data related to reactivity available for this product or its ingredients.
<b>Chemical stability</b>	: The product is stable.
<b>Possibility of hazardous reactions</b>	: Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Conditions to avoid</b>	: 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.
<b>Incompatible materials</b>	: Reactive or incompatible with the following materials: oxidizing materials
<b>Hazardous decomposition products</b>	: 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
Solvent naphtha (petroleum), light arom.	403 Acute Inhalation Toxicity	LC50 Inhalation Vapor	Rat	>5.6 mg/l	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	>5000 mg/kg	-	Based on data for a similar substance.
Monoalkylaryl alkoxyate aminated	None available.	LD50 Dermal	Rat	>3000 mg/kg	-	Based on data for a similar substance.
	None available.	LD50 Oral	Rat	2100 g/kg	-	Based on data for a similar substance.
	423 Acute Oral toxicity - Acute Toxic Class Method	LD50 Oral	Rat	>2000 mg/kg	-	-
1,2,4-trimethylbenzene	None available.	LC50 Inhalation Vapor	Rat	>10200 mg/m <sup>3</sup>	4 hours	Based on data for a similar substance.
	None available.	LD50 Dermal	Rat	>3440 mg/kg	-	Based on data for a similar substance.
	None available.	LD50 Oral	Rat	6000 mg/kg	-	-
mesitylene	None available.	LC50 Inhalation Vapor	Rat	>10.2 mg/l	4 hours	Based on data for a similar substance.
	None available.	LD50 Dermal	Rat	>3440 mg/kg	-	Based on data for a similar substance.
	None available.	LD50 Oral	Rat	>5000 mg/kg	-	-
Monoalkylaryl alkoxyate	None available.	LD50 Dermal	Rabbit	>2000 mg/kg	-	Based on data for a similar substance.
	None available.	LD50 Oral	Rat	>2000 mg/kg	-	Based on data



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1,2,3-trimethylbenzene	None available.	LC50 Inhalation Vapor	Rat	24 mg/l	4 hours	for a similar substance.
cumene	None available.	LD50 Oral	Rat	5000 mg/kg	-	-
	None available.	LD50 Dermal	Rabbit	>10000 mg/kg	-	-
	None available.	LD50 Oral	Rat	2260 mg/kg	-	-

**Conclusion/Summary** : Not available.

### Irritation/Corrosion

Product/ingredient name	Test	Species	Result	Remarks
Solvent naphtha (petroleum), light arom.	None available.	Rabbit	Skin - Mild irritant	-
	405 Acute Eye Irritation/Corrosion	Rabbit	Eyes - Not an Irritant	-
Monoalkylaryl alkoxyate aminated	None available.	Rabbit	Skin - Irritant	Based on data for a similar substance.
	None available.	Rabbit	Eyes - Severe irritant	Based on data for a similar substance.
1,2,4-trimethylbenzene	None available.	Rabbit	Skin - Irritant	Based on data for a similar substance.
mesitylene	None available.	Rabbit	Skin - Irritant	-
	405 Acute Eye Irritation/Corrosion	Rabbit	Eyes - Irritant	Based on data for a similar substance.
Monoalkylaryl alkoxyate	-	Rabbit	Skin - Irritant	-
	-	Rabbit	Eyes - Irritant	-
cumene	404 Acute Dermal Irritation/Corrosion	Rabbit	Skin - Not an Irritant	-
	405 Acute Eye Irritation/Corrosion	Rabbit	Eyes - Not an Irritant	-

### Conclusion/Summary

**Skin** : Causes skin irritation.  
**Eyes** : Causes serious eye damage.  
**Respiratory** : May cause respiratory irritation.

### Sensitization

Product/ingredient name	Test	Route of exposure	Species	Result	Remarks
Solvent naphtha (petroleum), light arom.	406 Skin Sensitization	skin	Guinea pig	Not sensitizing	Based on data for a similar substance.
1,2,4-trimethylbenzene	406 Skin Sensitization	skin	Guinea pig	Not sensitizing	Based on data for a similar substance.
mesitylene	406 Skin Sensitization	skin	Guinea pig	Not sensitizing	Based on data for a similar substance.
cumene	406 Skin Sensitization	skin	Guinea pig	Not sensitizing	-

### Conclusion/Summary

**Skin** : Not available.  
**Respiratory** : Not available.

### Mutagenicity

## Section 11. Toxicological information

Product/ingredient name	Test	Experiment	Result	Remarks
Solvent naphtha (petroleum), light arom.	471 Bacterial Reverse Mutation Test None available.	Experiment: In vitro Subject: Bacteria	Negative	Based on data for a similar substance.
Monoalkylaryl alkoxyate aminated	471 Bacterial Reverse Mutation Test 473 <i>In vitro</i> Mammalian Chromosomal Aberration Test	Experiment: In vitro Subject: Mammalian-Animal	Negative	Based on data for a similar substance.
1,2,4-trimethylbenzene	471 Bacterial Reverse Mutation Test 476 <i>In vitro</i> Mammalian Cell Gene Mutation Test	Experiment: In vitro Subject: Bacteria	Negative	-
mesitylene	471 Bacterial Reverse Mutation Test 476 <i>In vitro</i> Mammalian Cell Gene Mutation Test	Experiment: In vitro Subject: Mammalian-Animal	Negative	Based on data for a similar substance.
Monoalkylaryl alkoxyate	471 Bacterial Reverse Mutation Test	Experiment: In vitro Subject: Bacteria	Negative	-
cumene	471 Bacterial Reverse Mutation Test None available.	Experiment: In vitro Subject: Bacteria	Negative	Based on data for a similar substance.
	474 Mammalian Erythrocyte Micronucleus Test	Experiment: In vitro Subject: Mammalian-Animal	Negative	-
		Experiment: In vivo Subject: Mammalian-Animal	Equivocal	-

**Conclusion/Summary** : Not available.

### Carcinogenicity Result

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	-
cumene	451 Carcinogenicity Studies	Rat	105 weeks; 6 hours per day	Positive - Inhalation - TC	-

**Conclusion/Summary** : The classification of this product is based on the concentration of the carcinogenic substance present: Cumene

### Classification

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

### Reproductive toxicity

Product/ingredient name	Test	Route of exposure	Species	Maternal toxicity	Fertility	Development toxin	Remarks
Solvent naphtha (petroleum), light arom.	421 Reproduction/Developmental Toxicity Screening Test	Inhalation	Rat	Negative	Negative	Negative	Based on data for a similar substance.
1,2,4-trimethylbenzene	416 Two-Generation Reproduction Toxicity Study	Inhalation	Rat	Negative	Negative	Negative	Based on data for a similar substance.
	416 Two-Generation Reproduction Toxicity Study	Inhalation	Rat	Positive	Negative	Negative	Based on data for a similar substance.

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mesitylene	416 Two-Generation Reproduction Toxicity Study	Inhalation	Rat	Positive	Negative	Negative	Based on data for a similar substance.
cumene	413 Subchronic Inhalation Toxicity: 90-day Study	Inhalation	Rat	Positive	Negative	Negative	-

**Conclusion/Summary** : Not available.

### Teratogenicity

Product/ingredient name	Test	Species	Result	Remarks
Solvent naphtha (petroleum), light arom.	414 Prenatal Developmental Toxicity Study	Rat	Negative - Inhalation	Based on data for a similar substance.
1,2,4-trimethylbenzene	414 Prenatal Developmental Toxicity Study	Rat	Negative - Inhalation	-
mesitylene	414 Prenatal Developmental Toxicity Study	Rat	Negative - Inhalation	-
cumene	414 Prenatal Developmental Toxicity Study	Rabbit	Negative - Inhalation	-
	414 Prenatal Developmental Toxicity Study	Rat	Negative - Inhalation	-

**Conclusion/Summary** : Not available.

### Specific target organ toxicity (single exposure)

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

### Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Not available.			

### Aspiration hazard

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

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

### Potential acute health effects

**Eye contact** : Causes serious eye damage.

**Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.

**Skin contact** : Causes skin irritation.

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**Ingestion** : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : Adverse symptoms may include the following:  
pain  
watering  
redness

**Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness

**Skin contact** : Adverse symptoms may include the following:  
pain or irritation  
redness  
blistering may occur

**Ingestion** : Adverse symptoms may include the following:  
stomach pains  
nausea or vomiting

### 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
Solvent naphtha (petroleum), light arom.	None available.	Rat	500 mg/kg	-	Sub-acute NOAEL Oral	Based on data for a similar substance.
1,2,4-trimethylbenzene	453 Combined Chronic Toxicity/ Carcinogenicity Studies	Rat	1.402 mg/l	109 weeks	Chronic NOAEL Inhalation Vapor	Based on data for a similar substance.
	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 <sup>3</sup>	12 months	Chronic NOAEL Inhalation Vapor	Based on data for a similar substance.
mesitylene	408 Repeated Dose 90-Day Oral Toxicity Study in Rodents	Rat	600 mg/kg	-	Sub-chronic NOAEL Oral	-
	413 Subchronic Inhalation Toxicity: 90-day Study	Rat	1.23 mg/l	3 months	Sub-chronic NOAEL Inhalation Vapor	Based on data for a similar substance.
1,2,3-trimethylbenzene	None available.	Rat	25 ppm	4 weeks	Sub-acute LOAEL	-

## Section 11. Toxicological information

Cumene	None available.	Rat	123 mg/m <sup>3</sup>	3 months	Inhalation Vapor Sub-chronic NOAEL	-
	None available.	Rat	535.8 mg/kg	-	Inhalation Vapor Sub-chronic NOAEL Oral	-
	413 Subchronic Inhalation Toxicity: 90-day Study	Rat	125 ppm	90 days	Inhalation Vapor Sub-chronic NOAEL	-

<b>Conclusion/Summary</b>	: Not available.
<b>General</b>	: No known significant effects or critical hazards.
<b>Carcinogenicity</b>	: Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.
<b>Mutagenicity</b>	: No known significant effects or critical hazards.
<b>Teratogenicity</b>	: No known significant effects or critical hazards.
<b>Developmental effects</b>	: No known significant effects or critical hazards.
<b>Fertility effects</b>	: No known significant effects or critical hazards.

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure	Remarks
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	-
Monoalkylaryl alkoxyate aminated	Chronic NOEL 2.6 mg/l	Fish - Pimephales promelas	14 days	Based on data for a similar substance.
	Acute EL50 3.5 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours	-
1,2,4-trimethylbenzene mesitylene	Chronic NOEL 1 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours	-
	Acute LC50 3.6 mg/l	Daphnia - Daphnia magna	48 hours	-
	Acute LC50 7.72 mg/l	Fish - Pimephales promelas	96 hours	-
	Acute EL50 53 mg/l	Algae - Desmodesmus subspicatus	48 hours	-
	Acute LL50 6 mg/l	Daphnia - Daphnia magna	48 hours	-
	Acute LL50 12.52 mg/l	Fish - Carassius auratus	96 hours	-
	Chronic EL10 16 mg/l	Algae - Desmodesmus subspicatus	48 hours	-
	Chronic NOEC 0.4 mg/l	Daphnia - Daphnia magna	21 days	-

## Section 12. Ecological information

Monoalkylaryl alkoxylate	Acute EC50 >100 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours	Based on data for a similar substance. Based on data for a similar substance. Based on data for a similar substance.
	Acute EL50 >1000 mg/l	Daphnia - Daphnia magna	48 hours	
	Acute LC50 >105 mg/l	Fish - Oncorhynchus mykiss	96 hours	
1,2,3-trimethylbenzene	Acute EC50 4.4 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours	-
	Acute EC50 2.7 mg/l	Daphnia - Daphnia magna	48 hours	-
	Acute LC50 7.8 mg/l	Fish - Oryzias latipes	96 hours	-
cumene	Chronic NOEC 1.9 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours	-
	Acute EC50 2.01 mg/l	Algae - Desmodesmus subspicatus	72 hours	-
	Acute EC50 2.14 mg/l	Daphnia - Daphnia magna	48 hours	-
	Acute EL50 >2000 mg/l	Micro-organism	3 hours	-
	Acute LC50 4.8 mg/l	Fish - Oncorhynchus mykiss	96 hours	-
	Chronic EC10 1.35 mg/l	Algae - Desmodesmus subspicatus	72 hours	-
	Chronic NOEC 0.35 mg/l	Daphnia - Daphnia magna	21 days	QSAR result.
	Chronic NOEC 0.38 mg/l	Fish - D. rerio and P. promelas	28 days	QSAR result.

**Conclusion/Summary** : Toxic to aquatic life with long lasting effects.

### Persistence and degradability

Product/ingredient name	Test	Result	Remarks
mesitylene Monoalkylaryl alkoxylate	- OECD 301F Ready Biodegradability - Manometric Respirometry Test	42 % - Not readily - 28 days >60 % - Readily - 28 days	- Based on data for a similar substance.
1,2,3-trimethylbenzene	-	42 % - Not readily - 28 days	Based on data for a similar substance.
cumene	-	70 % - Readily - 20 days	-

### Bioaccumulative potential







Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Solvent naphtha (petroleum), light arom.	-	10 to 2500	high
1,2,4-trimethylbenzene	3.63	243	low
mesitylene	3.42	161	low
1,2,3-trimethylbenzene	3.66	194.98	low
cumene	3.55	35.48	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	UN1993	UN1993	UN1993
UN proper shipping name	Combustible liquid, n. o.s. (Solvent naphtha, Trimethylbenzenes)	FLAMMABLE LIQUIDS, N.O.S. (Solvent naphtha; Trimethylbenzenes). Marine pollutant	FLAMMABLE LIQUID, N.O.S. (Solvent naphtha; Trimethylbenzenes) Marine pollutant.	FLAMMABLE LIQUIDS, N.O.S. (Solvent naphtha; Trimethylbenzenes)
Transport hazard class(es)	Combustible liquid.	3  	3  	3  
Packing group	III	III	III	III
Environmental hazards	No.	Yes.	Yes.	Yes.

### Additional information

**IMDG** : Marine pollutant

**Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**Transport in bulk according to IMO instruments** : Not available.

## Section 15. Regulatory information

### U.S. Federal regulations

#### United States - TSCA Section 5

##### TSCA 5(a)2 final significant new use rules

None of the components are listed.

##### TSCA 5(a)2 proposed significant new use rules

None of the components are listed.

##### TSCA 5(e) substance consent order

## Section 15. Regulatory information

None of the components are listed.

### United States - TSCA Section 6

#### TSCA 6 final risk management

None of the components are listed.

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

List name

Status

Name on list

Ref. number

None of the components are listed.

### SARA 302/304

#### Composition/information on ingredients

			SARA 302 TPQ		SARA 304 RQ	
Name	%	EHS	(lbs)	(gallons)	(lbs)	(gallons)
furan	≤0.001	Yes.	500	64.1	100	12.8
propylene oxide	≤0.001	Yes.	10000	1444.3	100	14.4

**SARA 304 RQ** : 23809523.8 lbs / 10809523.8 kg [3060636.7 gal / 11585770.4 L]

**CERCLA** : CERCLA: Hazardous substances.: naphthalene: 100 lbs. (45.4 kg); xylene: 100 lbs. (45.4 kg); cumene: 5000 lbs. (2270 kg); benzene: 10 lbs. (4.54 kg); acetaldehyde: 1000 lbs. (454 kg); furan: 100 lbs. (45.4 kg); propylene oxide: 100 lbs. (45.4 kg); 1,2-epoxybutane: 100 lbs. (45.4 kg);

### SARA 311/312

**Classification** : FLAMMABLE LIQUIDS - Category 3  
 SKIN IRRITATION - Category 2  
 SERIOUS EYE DAMAGE - Category 1  
 CARCINOGENICITY - Category 2  
 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

#### Composition/information on ingredients

Name	%	Classification
Solvent naphtha (petroleum), light arom.	≥35 - ≤45	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 HNOC - Static-accumulating flammable liquid
Monoalkylaryl alkoxylate aminated	≥35 - ≤45	SKIN IRRITATION - Category 2 SERIOUS EYE DAMAGE - Category 1
1,2,4-trimethylbenzene	≥10 - ≤15	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
mesitylene	≥5 - ≤10	FLAMMABLE LIQUIDS - Category 3 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 ASPIRATION HAZARD - Category 1
Monoalkylaryl alkoxylate	≥1 - ≤3	SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A
1,2,3-trimethylbenzene	≥1 - ≤3	FLAMMABLE LIQUIDS - Category 3 SKIN IRRITATION - Category 2

## Section 15. Regulatory information

cumene	≥0.5 - <1	EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 FLAMMABLE LIQUIDS - Category 3 CARCINOGENICITY - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 ASPIRATION HAZARD - Category 1
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### SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	1,2,4-trimethylbenzene	95-63-6	≥10 - ≤15
	cumene	98-82-8	≥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
cumene	≥0.5 - <1	Yes.	No.	-	-
Benzene	<0.1	Yes.	Yes.	Yes.	Yes.
Naphthalene	<0.1	Yes.	No.	Yes.	-
Furan	≤0.001	Yes.	No.	-	-
Propylene oxide	≤0.001	Yes.	No.	-	-
acetaldehyde	≤0.0001	Yes.	No.	Yes.	-

www.P65Warnings.ca.gov.

### Canadian regulations

**Canada Significant New Activity Notice** : None of the components are listed.

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

**CEPA Toxic substances** : None of the components are listed.

### International Inventory Status

<b>Australia</b>	: All components are listed or exempted.
<b>Canada</b>	: All components are listed or exempted.
<b>China</b>	: At least one component is not listed. Notified. Please contact your supplier for information on the inventory status of this material.
<b>Japan</b>	: All components are listed or exempted.
<b>Republic of Korea</b>	: All components are listed or exempted.
<b>New Zealand</b>	: All components are listed or exempted.
<b>Philippines</b>	: All components are listed or exempted.
<b>Taiwan</b>	: All components are listed or exempted.
<b>United States Active</b>	: All components are active or exempted.
<b>Europe</b>	: For information on compliance with regulation (EC) No. 1907/2006 (REACH) and amendments please contact your Afton representative.

## Section 16. Other information

### History

**Date of issue/Date of revision** : 7/21/2021

**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.*