Safety Data Sheet

Latin America

HiTEC® 6676C Fuel Additive

SDS no. H6676C

Section 1. Identification

GHS product identifier : HiTEC® 6676C Fuel Additive

Product use : Petrochemical industry: Fuel additive.

Relevant identified uses of the substance or mixture and uses advised against

Identified uses
Industrial. Formulation and blending of fuel additives and fuels.

In case of emergency - Chemical

+55-2139581449 (Brazil)
+1-703-527-3887 (International)
+1-703-741-5979 (Spanish language)
+1-800-424-9300 (US & Canada)

Manufacturer / Supplier

Afton Chemical Corporation
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Richmond, VA 23219
USA

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

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Section 2. Hazards identification

Classification of the substance or mixture : FLAMMABLE LIQUIDS - Category 3
SKIN IRRITATION - Category 2
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
AQUATIC HAZARD (ACUTE) - Category 2
AQUATIC HAZARD (LONG-TERM) - Category 2

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : H226 - Flammable liquid and vapor.
H315 - Causes skin irritation.
H351 - Suspected of causing cancer.
H304 - May be fatal if swallowed and enters airways.
H335 - May cause respiratory irritation.
H336 - May cause drowsiness or dizziness.
H411 - Toxic to aquatic life with long lasting effects.

Precautionary statements

Section 2. Hazards identification

Prevention : P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P280 - Wear protective gloves. Wear eye or face protection. Wear protective clothing.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P241 - Use explosion-proof electrical, ventilating, lighting and all material-handling equipment.
P242 - Use only non-sparking tools.
P243 - Take precautionary measures against static discharge.
P233 - Keep container tightly closed.
P271 - Use only outdoors or in a well-ventilated area.
P273 - Avoid release to the environment.
P261 - Avoid breathing vapor.
P264 - Wash hands thoroughly after handling.

Response : P391 - Collect spillage.
P308 + P313 - IF exposed or concerned: Get medical attention.
P304 + P340 + P312 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.
P301 + P310 + P331 - IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting.
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P302 + P352 + P362+P364 - IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse.
No Code(s) - In case of fire, use water spray (fog), foam, dry chemical or CO_2.
P332 + P313 - If skin irritation occurs: Get medical attention.

Storage : P405 - Store locked up.
P403 - Store in a well-ventilated place.
P235 - Keep cool.

Disposal : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Other hazards which do not result in classification : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	CAS number	%	
Solvent naphtha (petroleum), light aromatic	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 AQUATIC HAZARD (ACUTE) - Category 2 AQUATIC HAZARD (LONG-TERM) - Category 2
Polyolefin alkyl phenol alkyl amine (2)	-	≥25 - ≤35	SKIN IRRITATION - Category 2
Alkaryl polyether	-	≥15 - ≤25	AQUATIC HAZARD (ACUTE) - Category 3 AQUATIC HAZARD (LONG-TERM) - Category 3

Section 3. Composition/information on ingredients

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 AQUATIC HAZARD (ACUTE) - Category 2 AQUATIC HAZARD (LONG-TERM) - Category 2
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) - Category 3 ASPIRATION HAZARD - Category 1 AQUATIC HAZARD (ACUTE) - Category 2 AQUATIC HAZARD (LONG-TERM) - Category 2
2-ethylhexan-1-ol	104-76-7	≥1 - ≤3	FLAMMABLE LIQUIDS - Category 4 ACUTE TOXICITY (oral) - Category 5 ACUTE TOXICITY (dermal) - Category 5 ACUTE TOXICITY (inhalation) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2B SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 AQUATIC HAZARD (ACUTE) - Category 3
1,2,3-trimethylbenzene	526-73-8	≥1 - ≤2.6	FLAMMABLE LIQUIDS - Category 3 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 AQUATIC HAZARD (ACUTE) - Category 2 AQUATIC HAZARD (LONG-TERM) - Category 2
cumene	98-82-8	≥0.5 - <1	FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY (oral) - Category 5 CARCINOGENICITY - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE)

Section 3. Composition/information on ingredients

			(Respiratory tract irritation) - Category 3 ASPIRATION HAZARD - Category 1 AQUATIC HAZARD (ACUTE) - Category 2 AQUATIC HAZARD (LONG-TERM) - Category 2

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

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 : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention. 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. 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 : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.

Skin contact : Causes skin irritation.

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

Over-exposure signs/symptoms

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

Section 4. First aid measures

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:
irritation
redness

Ingestion : Adverse symptoms may include the following:
nausea or vomiting

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.

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 CO_2.

Unsuitable extinguishing media : 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. This material is toxic to aquatic life with long lasting effects. 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.

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. Collect spillage.

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 swallow. 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. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

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.

Section 7. Handling and storage

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

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
1,2,4-trimethylbenzene	**ACGIH TLV (United States, 3/2017).** TWA: 25 ppm 8 hours. TWA: 123 mg/m³ 8 hours.
mesitylene	**ACGIH TLV (United States, 3/2017).** TWA: 25 ppm 8 hours. TWA: 123 mg/m³ 8 hours.
1,2,3-trimethylbenzene	**ACGIH TLV (United States, 3/2017).** TWA: 25 ppm 8 hours. TWA: 123 mg/m³ 8 hours.
cumene	**Minsitry of Labor and Employement (Brazil, 11/2001). Absorbed through skin.** TWA: 39 ppm 8 hours. TWA: 190 mg/m³ 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.

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.

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.

Section 8. Exposure controls/personal protection

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 : Amber.

Odor : Not available.

Odor threshold : Not available.

pH : Not available.

Melting point : -64°C (-83.2°F)

Boiling point : 150 to 215°C (302 to 419°F)

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 : 0.45 kPa (3.4 mm Hg) [room temperature]

Vapor density : Not available.

Density : 0.9113 g/cm^3 [59°F (15°C)]

Relative density : 0.9128

Solubility : Not available.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : 415°C (779°F)

Decomposition temperature : Not available.

Viscosity : Kinematic (40°C): 0.14 cm^2/s

Viscosity : Not available.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

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

Section 10. Stability and reactivity

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
Solvent naphtha (petroleum), light aromatic	403 Acute Inhalation Toxicity	LC50 Inhalation Vapor	Rat	>7.63 mg/l	4 hours	-
	402 Acute Dermal Toxicity	LD50 Dermal	Rabbit	>2000 mg/kg	-	-
	-	LD50 Oral	Rat	2900 mg/kg	-	-
	-	LD50 Oral	Rat	5000 mg/kg	-	-
Polyolefin alkyl phenol alkyl amine (2)	402 Acute Dermal Toxicity	LD50 Dermal	Rat	>2000 mg/kg	-	Based on data for a similar substance.
	423 Acute Oral toxicity - Acute Toxic Class Method	LD50 Oral	Rat	>5000 mg/kg	-	Based on data for a similar substance.
Alkaryl polyether	None available.	LD50 Dermal	Rabbit	>3000 mg/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/m³	4 hours	Based on data for a similar substance.
	-	LD50 Dermal	Rabbit	3160 mg/kg	-	-
	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	>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.
2-ethylhexan-1-ol	403 Acute Inhalation Toxicity	LC50 Inhalation Dusts and mists	Rat	1 to 5.3 mg/l	4 hours	-
	-	LC50 Inhalation Vapor	Rat	>0.89 mg/l	4 hours	-
	None available.	LD50 Dermal	Rat	1970 mg/kg	-	WOE does not support classification
	401 Acute Oral Toxicity	LD50 Oral	Rat	2040 mg/kg	-	-
1,2,3-trimethylbenzene	None available.	LC50 Inhalation Vapor	Rat	24 mg/l	4 hours	-
	None available.	LD50 Oral	Rat	5000 mg/kg	-	-
cumene	None available.	LC50 Inhalation Vapor	Rat	40 mg/l	4 hours	-
	None available.	LD50 Dermal	Rabbit	>10000 mg/kg	-	-

Section 11. Toxicological information

	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 aromatic	404 Acute Dermal Irritation/Corrosion	Rabbit	Skin - Mild irritant	-
	405 Acute Eye Irritation/Corrosion	Rabbit	Eyes - Mild irritant	-
Polyolefin alkyl phenol alkyl amine (2)	404 Acute Dermal Irritation/Corrosion	Rabbit	Skin - Irritant	Based on data for a similar substance.
	405 Acute Eye Irritation/Corrosion	Rabbit	Eyes - Mild irritant	Based on data for a similar substance.
Alkaryl polyether	404 Acute Dermal Irritation/Corrosion	Rabbit	Skin - Mild irritant	Based on data for a similar substance.
	405 Acute Eye Irritation/Corrosion	Rabbit	Eyes - Mild irritant	Based on data for a similar substance.
1,2,4-trimethylbenzene	404 Acute Dermal Irritation/Corrosion	Rabbit	Skin - Irritant	Based on data for a similar substance.
	405 Acute Eye Irritation/Corrosion	Rabbit	Eyes - Mild irritant	Based on data for a similar substance.
mesitylene	404 Acute Dermal Irritation/Corrosion	Rabbit	Skin - Irritant	-
	405 Acute Eye Irritation/Corrosion	Rabbit	Eyes - Irritant	Based on data for a similar substance.
2-ethylhexan-1-ol	404 Acute Dermal Irritation/Corrosion	Rabbit	Skin - Irritant	-
	405 Acute Eye Irritation/Corrosion	Rabbit	Eyes - Irritant	-
cumene	404 Acute Dermal Irritation/Corrosion	Rabbit	Skin - Mild irritant	-
	None available.	Rabbit	Eyes - Mild irritant	-

Conclusion/Summary

Skin : Causes skin irritation.

Eyes : Not available.

Respiratory : May cause respiratory irritation.

Sensitization

Product/ingredient name	Test	Route of exposure	Species	Result	Remarks
Solvent naphtha (petroleum), light aromatic	406 Skin Sensitization	skin	Guinea pig	Not sensitizing	-
Alkaryl polyether	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 classified as a skin sensitizer. Based on test data for this or similar products.

Respiratory : Not available.

Mutagenicity

Section 11. Toxicological information

Product/ingredient name	Test	Experiment	Result	Remarks
Solvent naphtha (petroleum), light aromatic	471 Bacterial Reverse Mutation Test	Experiment: In vitro Subject: Bacteria	Negative	-
	None available.	Experiment: In vitro Subject: Mammalian-Animal	Negative	-
Alkaryl polyether	471 Bacterial Reverse Mutation Test	Experiment: In vitro Subject: Bacteria	Negative	Based on data for a similar substance.
	473 *In vitro* 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	Experiment: In vitro Subject: Bacteria	Negative	-
	476 *In vitro* Mammalian Cell Gene Mutation Test	Experiment: In vitro Subject: Mammalian-Animal	Negative	Based on data for a similar substance.
mesitylene	471 Bacterial Reverse Mutation Test	Experiment: In vitro Subject: Bacteria	Negative	-
	476 *In vitro* Mammalian Cell Gene Mutation Test	Experiment: In vitro Subject: Mammalian-Animal	Negative	Based on data for a similar substance.
2-ethylhexan-1-ol	471 Bacterial Reverse Mutation Test	Experiment: In vitro Subject: Bacteria	Negative	-
	473 *In vitro* Mammalian Chromosomal Aberration Test	Experiment: In vitro Subject: Mammalian-Animal	Negative	-
cumene	471 Bacterial Reverse Mutation Test	Experiment: In vitro Subject: Bacteria	Negative	-
	None available.	Experiment: In vitro Subject: Mammalian-Animal	Negative	-
	474 Mammalian Erythrocyte Micronucleus Test	Experiment: In vivo Subject: Mammalian-Animal	Equivocal	-

Conclusion/Summary : Not available.

Carcinogenicity

Product/ingredient name	Test	Species	Exposure	Result	Remarks
2-ethylhexan-1-ol	451 Carcinogenicity Studies	Mouse	18 months; 5 days per week	Negative - Oral	-
cumene	451 Carcinogenicity Studies	Rat	105 weeks; 6 hours per day	Positive - Route of exposure unreported	-

Conclusion/Summary : Suspected of causing cancer.

Reproductive toxicity

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

Section 11. Toxicological information

cumene	Toxicity Study 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 aromatic	414 Prenatal Developmental Toxicity Study	Rat	Negative - Route of exposure unreported	-
1,2,4-trimethylbenzene	414 Prenatal Developmental Toxicity Study	Rat	Negative - Route of exposure unreported	-
mesitylene	414 Prenatal Developmental Toxicity Study	Rat	Negative - Route of exposure unreported	-
2-ethylhexan-1-ol	414 Prenatal Developmental Toxicity Study	Mouse	Negative - Oral	-
cumene	414 Prenatal Developmental Toxicity Study	Rabbit	Negative - Route of exposure unreported	-

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Solvent naphtha (petroleum), light aromatic	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
1,2,4-trimethylbenzene	Category 3	Not applicable.	Respiratory tract irritation
mesitylene	Category 3	Not applicable.	Respiratory tract irritation
2-ethylhexan-1-ol	Category 3	Not applicable.	Respiratory tract irritation
1,2,3-trimethylbenzene	Category 3	Not applicable.	Respiratory tract irritation
cumene	Category 3	Not applicable.	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 aromatic	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 : No known significant effects or critical hazards.

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

Section 11. Toxicological information

Skin contact : Causes skin irritation.

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 or irritation
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:
irritation
redness

Ingestion : Adverse symptoms may include the following:
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 aromatic	None available.	Rat	500 mg/kg	-	Sub-acute NOAEL Oral	-
	453 Combined Chronic Toxicity/ Carcinogenicity Studies	Rat	1.402 mg/l	90 days	Sub-chronic NOAEL Inhalation Vapor	-
Polyolefin alkyl phenol alkyl amine (2)	407 Repeated Dose 28-day Oral Toxicity Study in Rodents	Rat	150 mg/kg	-	Sub-acute NOAEL Oral	Based on data for a similar substance.
1,2,4-trimethylbenzene	408 Repeated Dose 90-Day Oral Toxicity Study in Rodents	Rat	600 mg/kg	-	Sub-chronic NOAEL Oral	-
	452 Chronic Toxicity Studies	Rat	1800 mg/ m^3	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	-
2-ethylhexan-1-ol	408 Repeated Dose	Rat	125 mg/kg	-	Sub-chronic	-

Section 11. Toxicological information

	90-Day Oral Toxicity Study in Rodents				NOAEL Oral	
	413 Subchronic Inhalation Toxicity: 90-day Study	Rat	640 mg/m³	90 days	Sub-chronic NOAEL Inhalation Vapor	-
1,2,3-trimethylbenzene	None available.	Rat	25 ppm	4 weeks	Sub-acute LOAEL Inhalation Vapor	-
	None available.	Rat	123 mg/m³	3 months	Sub-chronic NOAEL Inhalation Vapor	-
cumene	None available.	Rat	22.8 mg/kg	-	Sub-chronic LOAEL Oral	-

Conclusion/Summary : Not available.

General : No known significant effects or critical hazards.

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

Mutagenicity : No known significant effects or critical hazards.

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.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure	Remarks
Solvent naphtha (petroleum), light aromatic	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	-
mesitylene	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	-

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2-ethylhexan-1-ol	Acute EC50 39 mg/l	Daphnia - Daphnia magna	48 hours	-
	Acute EL50 16.6 mg/l	Algae - Desmodesmus subspicatus	72 hours	-
	Acute LC50 17.1 mg/l	Fish - Leuciscus idus melanotus	96 hours	-
	Chronic EL10 5.3 mg/l	Algae - Desmodesmus subspicatus	72 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	-
	Chronic NOEC 1.9 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours	-
cumene	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/degradability

Product/ingredient name	Test	Result	Remarks
mesitylene	-	42 % - Not readily - 28 days	-
2-ethylhexan-1-ol	OECD 301C Ready Biodegradability - Modified MITI Test (I)	100 % - Readily - 14 days	-
1,2,3-trimethylbenzene	-	42 % - Not readily - 28 days	Based on data for a similar substance.
cumene	-	70 % - Readily - 20 days	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Alkaryl polyether	-	-	Not readily
1,2,4-trimethylbenzene	-	-	Inherent
mesitylene	-	-	Not readily
2-ethylhexan-1-ol	-	-	Readily
1,2,3-trimethylbenzene	-	-	Not readily
cumene	-	-	Readily

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Solvent naphtha (petroleum), light aromatic	-	10 to 2500	high
1,2,4-trimethylbenzene	3.63	243	low
mesitylene	3.42	161	low
2-ethylhexan-1-ol	2.9	25.33	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

Regulatory information	UN number	Proper shipping name	Class	Packing group	Label	Additional information
Brazil	UN1993	FLAMMABLE LIQUID, N.O.S. (Solvent naphtha; Trimethylbenzenes)	3	III		**Risk number** 30
IMDG Class	UN1993	FLAMMABLE LIQUID, N.O.S. (Solvent naphtha; Trimethylbenzenes) Marine pollutant.	3	III		**Remarks** Marine pollutant
IATA-DGR Class	UN1993	FLAMMABLE LIQUID, N.O.S. (Solvent naphtha; Trimethylbenzenes)	3	III		-

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.

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.

Section 15. Regulatory information

Safety, health and environmental regulations specific for the product : Not determined.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Section 15. Regulatory information

Ingredient name	List name	Status
PAHs PAHs	POPs - Annex 3 POPs - Annex 3	Listed Listed

International lists

National inventory

Australia : All components are listed or exempted.

Canada : All components are listed or exempted.

China : All components are listed or exempted.

Japan : All components are listed or exempted.

Republic of Korea : All components are listed or exempted.

New Zealand : All components are listed or exempted.

Philippines : All components are listed or exempted.

Taiwan : All components are listed or exempted.

United States : All components are listed or exempted.

Europe : 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 : 12/20/2018

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

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.

This document has been prepared in accordance with the SDS requirements of ABNT NBR 14725-4.