



Safety Data Sheet

HiTEC 6560 Fuel Additive

MSDS no. H6560

HiTEC is a trademark owned by Afton Chemical Corporation or one of its subsidiaries.

1. Product and company identification

Product use Petrochemical industry: Fuel additive.

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In case of emergency - Chemical

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2. Hazards identification

Notice to reader

Afton operates a world-wide system for hazard communication. Some hazards shown in Section 2 may apply to non-EU countries and may not result in classification and labeling in the EU. Please see Sections 3 and 15 for country specific classification information, and Section 11 for additional details.

Europe: The preparation is classified as dangerous according to Directive 1999/45/EC and its amendments.

Australia: HAZARDOUS SUBSTANCE. DANGEROUS GOODS.

Primary hazards and critical effects : WARNING!
CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION.
ASPIRATION HAZARD IF SWALLOWED.

Physical/chemical hazards : COMBUSTIBLE. - United States and Canada
FLAMMABLE. - European Union
VAPOR MAY CAUSE FLASH FIRE.

Environmental hazards : Toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

Hazardous Material Information System (U.S.A.)

Health	1
Fire hazard	2
Reactivity	0

GHS Classification

Hazard classification : FLAMMABLE LIQUIDS - Category 3
SKIN CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2B
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) blood system, central nervous system (CNS), eyes, gastrointestinal tract, heart, immune system, kidneys, liver, lungs, respiratory tract and skin - Category 2
ASPIRATION HAZARD - Category 2
AQUATIC TOXICITY (CHRONIC) - Category 2

Symbol : 

Signal word : Warning

Hazard statements : Flammable liquid and vapor.
Causes skin irritation.
Causes eye irritation.
May be harmful if swallowed and enters airways.
May cause damage to organs through prolonged or repeated exposure. (blood system, central nervous system (CNS), eyes, gastrointestinal tract, heart, immune system, kidneys, liver, lungs, respiratory tract, skin)
Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention : Wear protective gloves. Wear eye/face protection. Keep away from ignition sources such as heat/sparks/open flame. - No smoking. Use explosion-proof electrical/ventilating/lighting/material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Avoid release to the environment. Do not breathe vapor. Wash thoroughly after handling.

Response : Collect spillage. Immediately call a POISON CENTER or doctor/physician. IF SWALLOWED: Do NOT induce vomiting. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Take off contaminated clothing and wash before re-use. Rinse skin with water/shower. Wash with plenty of soap and water. If skin irritation occurs, seek medical advice/attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention. Wash hands after handling. Get medical attention/advice if you feel unwell.

Storage : Store locked up. Store in cool/well-ventilated place.

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

3. Composition/information on ingredients

Note: see section 8 for occupational exposure limits and section 11 for LC50/LD50 information

Substance/Preparation : Preparation

<u>Ingredient name</u>	<u>CAS no.</u>	<u>Conc. (% w/w)</u>	<u>EU Classification</u>	<u>WHMIS Regulated?</u>
Solvent naphtha (petroleum), light aromatic	64742-95-6	30 - 60	R10 Xn; R65 Xi; R37 R66, R67 N; R51/53	Yes.
Polyolefin alkyl phenol alkyl amine	Proprietary	20 - 30	Xi; R36/38	Yes.**
Benzene, 1,2,4-trimethyl-	95-63-6	10 - 19.9	R10 Xn; R20 Xi; R36/37/38 N; R51/53	Yes.***
Benzene, 1,3,5-trimethyl-	108-67-8	5 - 9.9	R10 Xi; R37 N; R51/53	Yes.***
N-Propylbenzene	103-65-1	5 - 9.9	R10 Xn; R65 Xi; R37 N; R51/53	Yes.***
Xylene	1330-20-7	1 - 4.9	R10 Xn; R20/21 Xi; R38	Yes.***
2-Ethyl hexanol	104-76-7	1 - 4.9	Xi; R36/38	Yes.
Cumene	98-82-8	1 - 4.9	R10 Xn; R65 Xi; R37 N; R51/53	Yes.***
Benzene, 1,2,3-trimethyl-	526-73-8	1 - 4.9	R10	Yes.***
Solvent naphtha (petroleum), heavy aromatic	64742-94-5	0.5 - 0.99	Xn; R65 R66, R67 N; R51/53	Yes.

Notice to reader

** See Section 15 for information concerning WHMIS regulated ingredients marked as proprietary.

***These ingredients are components of a complex mixture and not additional ingredients in the controlled product.

4. First aid measures

- Inhalation** : If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
- Ingestion** : DO NOT induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. If affected person is fully conscious, give one glass of water to drink. Never give anything by mouth to an unconscious person. Get immediate medical attention.
- Skin contact** : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately.
- Eye contact** : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

5. Fire-fighting measures

- Extinguishing media** : In case of fire, use water spray (fog), foam, dry chemical or CO₂.
- Fire-fighting procedures** : Fire-fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.
- Fire/explosion hazards** : COMBUSTIBLE. - United States and Canada FLAMMABLE. - European Union
VAPOR MAY CAUSE FLASH FIRE. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.
- Hazardous decomposition products** : Decomposition products may include the following materials: carbon oxides (CO, CO₂). nitrogen oxides (NO, NO₂ etc.)
- Flash point** : Closed cup: 44°C (111.2°F) [Pensky-Martens. Minimum]

6. Accidental release measures

- Personal precautions** : Immediately contact emergency personnel. Eliminate all ignition sources. Keep unnecessary personnel away. Use suitable protective equipment (section 8). Follow all fire-fighting procedures (section 5). Do not touch or walk through spilled material.
- Environmental precautions and clean-up methods** : If emergency personnel are unavailable, contain spilled material. For small spills, add absorbent (soil may be used in the absence of other suitable materials) and use a non-sparking or explosion-proof means to transfer material to a sealable, appropriate container for disposal. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal. Avoid contact of spilled material with soil and prevent runoff entering surface waterways.

Note: see section 1 for emergency contact information and section 13 for waste disposal.

7. Handling and storage

- Handling** : Avoid contact with eyes, skin and clothing. Keep container closed. Use only with adequate ventilation. Avoid breathing vapor or mist. Keep away from heat, sparks and flame. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Wash thoroughly after handling.
- Storage** : Keep container in a well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).

8. Exposure controls/personal protection

- Engineering controls** : Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.
- Personal protective equipment**
- Respiratory system** : Use appropriate respiratory protection if there is the potential to exceed the exposure limit(s).
- Skin and body** : Where contact is likely, wear chemical resistant gloves, a chemical resistant suit, and boots. Additional body garments should be used based upon the task being performed.
- Hands** : Hand Protection: Wear chemical resistant gloves. Nitrile gloves of minimum thickness 0.4 mm have an expected breakthrough time of 30 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.
- Eyes** : Safety goggles are considered minimum protection. Goggles with a face shield may be necessary depending on quantity of material and conditions of use.

Occupational exposure limits

Ingredient name

[OEL United States](#)

[OEL Canada](#)

[OEL Europe](#)

[OEL Australia](#)

1) Solvent naphtha (petroleum), light aromatic	OSHA (United States). TWA: 500 ppm 8 hour(s).	OSHA (United States). TWA: 500 ppm 8 hour(s).	OSHA (United States). TWA: 500 ppm 8 hour(s).	
2) Benzene, 1,2,4-trimethyl-	ACGIH (United States, 1999). TWA: 25 ppm	TWA: 25 ppm	EH40 (UK) (Europe). TWA: 25 ppm	ACGIH (United States, 1999). TWA: 25 ppm
3) Benzene, 1,3,5-trimethyl-	ACGIH (United States, 1999). TWA: 25 ppm	TWA: 25 ppm	EH40 (UK) (Europe). TWA: 25 ppm	ACGIH (United States, 1999). TWA: 25 ppm
4) Xylene	ACGIH (United States, 1996). TWA: 100 ppm STEL: 150 ppm	TWA: 100 STEL: 150	EH40 (UK) (Europe, 2002). Skin TWA: 50 ppm 8 hour(s). STEL: 100 ppm 15 minute(s).	NOHSC (Australia, 2003). STEL: 80 ppm 15 minute(s). STEL: 150 ppm 15 minute(s).
5) Cumene	ACGIH (United States, 1994). Skin TWA: 50 ppm OSHA (United States, 1989). Skin TWA: 50 ppm	TWA: 50 ppm	EH40 (UK) (Europe). Skin TWA: 25 ppm 8 hour(s). TWA: 125 mg/m ³ 8 hour(s). STEL: 250 mg/m ³ 15 minute(s).	NOHSC (Australia, 2003). Skin TWA: 25 ppm 8 hour(s). STEL: 75 ppm 15 minute(s).
6) Benzene, 1,2,3-trimethyl-	ACGIH (United States, 1999). TWA: 25 ppm	TWA: 25 ppm	ACGIH (United States, 1999). TWA: 25 ppm	ACGIH (United States, 1999). TWA: 25 ppm

9. Physical and chemical properties

Physical state and Appearance	: Liquid.
Color	: Amber. [Light]
Odor	: Amine-like.
Density	: 0.902 g/cm ³
Specific gravity	: 0.9019 @ 15.6°C
Solubility	: Insoluble in the following materials: cold water.
Viscosity	: 9 cSt at 40°C
Auto-ignition temperature	: Not determined.
Flash point	: Closed cup: 44°C (111.2°F) [Pensky-Martens. Minimum]

10. Stability and reactivity

Stability	: The product is stable.
Materials to avoid	: Strong oxidizing and reducing agents.
Conditions to avoid	: High temperatures, sparks, and open flames.

11. Toxicological information

Routes of entry	: Skin, Eyes, Ingestion, and Inhalation.
Target organs	: Contains material which may cause damage to the following organs: blood, kidneys, lungs, liver, heart, gastrointestinal tract, upper respiratory tract, immune system, skin, eyes, central nervous system (CNS).
Acute effects	
Inhalation	: Irritating to respiratory system.
Ingestion	: Aspiration hazard if swallowed. Can enter lungs and cause damage. Does not meet EU R65 classification criteria. Ingestion may cause gastrointestinal irritation and diarrhea.
Skin contact	: Irritating to skin.
Eye contact	: Irritating to eyes.
Adverse effects	:

- Adverse symptoms may include the following:: In the presence of slight maternal toxicity, fetotoxic effects have been observed in the offspring of rats exposed by inhalation to Solvent Naphtha (petroleum) light aromatic.
- Adverse symptoms may include the following:: This product contains trimethylbenzene. Literature data indicate that long-term inhalation exposure causes blood effects in laboratory animals.
- Adverse symptoms may include the following:: Central nervous system, liver, kidneys, and blood effects by inhalation and heart beat irregularity (arrythmia) and heart beat - increase. High exposures to xylene in some animal studies, often at levels toxic to the mother, affected embryo/fetal development. The significance of this finding to humans is not known.
- Adverse symptoms may include the following:: liver, kidneys, lungs, and heart effects by dermal route and immune system effects by ingestion route.

Carcinogenic effects :

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA	EU
Xylene	A5	-	-	-	-	-	-


Toxicity data









Product/ingredient name	Result	Species	Dose	Exposure
Solvent naphtha (petroleum), light aromatic	LD50 Oral	Rat	8400 mg/kg	-
	LD50 Oral	Rat	5000 mg/kg	-
	LD50 Oral	Rat	2900 mg/kg	-
Benzene, 1,2,4-trimethyl-	LD50 Oral	Rat	5000 mg/kg	-
	LC50 Inhalation Vapor	Rat	18000 mg/m ³	4 hours
2-Ethyl hexanol	LD50 Dermal	Rabbit	1970 mg/kg	-
	LD50 Dermal	Rabbit	1700 mg/kg	-
	LD50 Oral	Mouse	2000 to 3800 mg/kg	-
	LD50 Oral	Guinea pig	1900 mg/kg	-
	LD50 Oral	Rat	2000 to 5000 mg/kg	-
Benzene, 1,3,5-trimethyl-	LC50 Inhalation Vapor	Rat	>227 ppm	6 hours
	LC50 Inhalation Vapor	Rat	24000 mg/m ³	4 hours
N-Propylbenzene Cumene	LD50 Oral	Rat	6040 mg/kg	-
	LD50 Dermal	Rabbit	10578 mg/kg	-
	LD50 Oral	Mouse	12750 mg/kg	-
	LD50 Oral	Rat	1400 mg/kg	-
	LC50 Inhalation Vapor	Rat	8000 ppm	4 hours
Xylene	LD50 Dermal	Rabbit	>14100 mg/kg	-
	LD50 Oral	Rat	4300 mg/kg	-
	LC50 Inhalation Vapor	Rat	5000 to 8500 ppm	4 hours

Other information : Not available.**12. Ecological information**

- Environmental hazards :** Toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment. Based on calculation.
- Environmental fate :** This product contains components which may be persistent in the environment.

13. Disposal considerations**Waste handling and disposal :** Waste must be disposed of in accordance with federal, state and local environmental control regulations.**14. Transport information**

Regulatory information	UN number	Proper shipping name	Class	Packing group	Label	Additional information
DOT Classification	NA1993	Combustible liquids, n.o.s. (xylene, petroleum distillates)	Combustible liquid.	III		-
TDG Classification	UN1993	Flammable liquid, n.o.s. (Xylene, Petroleum distillates)	3	III		-

ADR/RID Class	UN1993	Flammable liquid, n.o.s. (Xylene, Petroleum distillates)	3	III	 	Hazard identification number 30
IMDG Class	UN1993	Flammable liquid, n.o.s. (Xylene, Petroleum distillates) Marine pollutant	3	III	 	Marine pollutant
IATA-DGR Class	UN1993	Flammable liquid, n.o.s. (Xylene, Petroleum distillates)	3	III	 	-
ADG Class	UN1993	Flammable liquid, n.o.s. (Xylene, Petroleum distillates)	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.

15. Regulatory information

EU regulations**Hazard symbol(s)**

Irritant, Dangerous for the environment

Risk phrases

- : R10- Flammable.
- R36/37/38- Irritating to eyes, respiratory system and skin.
- R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety phrases

- : S16- Keep away from sources of ignition - No smoking.
- S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- S28- After contact with skin, wash immediately with plenty of water.
- S36/37/39- Wear suitable protective clothing, gloves and eye/face protection.
- S57- Use appropriate containment to avoid environmental contamination.

US regulations**SARA 313 toxic chemical notification and release reporting (w/w%)**

- : Benzene, 1,2,4-trimethyl- 10 - 19.9
- Xylene 1 - 4.9
- Cumene 1 - 4.9

SARA 311/312 Hazardous Categorization

- : SARA 311/312 MSDS distribution - chemical inventory - hazard identification: : Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard

RQ (Reportable quantity)

- : CERCLA: Hazardous substances.: Xylene: 100 lbs. (45.4 kg); CUMENE: 5000 lbs. (2270 kg); Ethylbenzene: 1000 lbs. (454 kg); Naphthalene: 100 lbs. (45.4 kg); Benzene: 10 lbs. (4.54 kg)

State - California Prop. 65

- : This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute:
Ethylbenzene
Naphthalene
Toluene
Benzene
Furan
Propylene oxide
Acetaldehyde

Canadian regulations**WHMIS (Classification)**

- : Class B-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F).
- Class D-2B: Material causing other toxic effects (Toxic).

HMIRC Registry Number

- : 7855

Claim granted.

- : Date filed: May 6, 2010

International Inventory Status**United States (TSCA)**

- : All components are listed or exempted.

Canada

- : All components are listed or exempted.

Europe	:	All components are listed or exempted.
Japan (ENCS)	:	All components are listed or exempted.
Australia (NICNAS)	:	At least one component is not listed.
Korea (ECL)	:	All components are listed or exempted.
China (IECSC)	:	All components are listed or exempted.
Philippines (PICCS)	:	All components are listed or exempted.

16. Other information

PREPARATION INFORMATION

Validated by HS&E Department (Tel: +1 804 788 5800) on 6/1/2010.

 Date of printing : 9/21/2010.

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.

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*** END OF MSDS ***