



Material Safety Data Sheet

HiTEC 343 Performance Additive

MSDS no. H343

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

1. Product and company identification

Product use Petrochemical industry: Gear Additive Package

Date of issue/Revisions 3 April 2008

In case of emergency - Chemical

1-800-403-0044 (US & Canada)
1-804-648-7727 (International)
32-2-507-20-64 (Europe)
81-3-5210-4890 (Japan)

Manufacturer / Supplier

Afton Chemical Corporation
500 Spring St.
Richmond, VA 23219
1-804-788-5800

Afton Chemical Limited
Euro-Tech Centre
London Road, Bracknell, Berkshire
RG12 2UW, England
44 1344-304141
msds@aftonchemical.com

In Japan:
Afton Chemical Japan Corporation
Sumitomo Fudousan Sanbancho Bldg. 5F
6-26 Sanbancho, Chiyoda-ku
Tokyo 102-0075 Japan
Emergency phone: 81-3-5210-4890

In Australia:
Afton Chemical Asia Pacific Company
Level 9, 20 Berry Street
North Sydney, NSW 2060
Australia
Telephone number: 02-9923-1588
Business Hours: 9:00am - 5:00pm

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. NON-DANGEROUS GOODS.

Primary hazards and critical effects : WARNING!
CAUSES RESPIRATORY TRACT AND EYE IRRITATION.

Physical/chemical hazards : COMBUSTIBLE. - United States and Canada
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

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>
------------------------	----------------	----------------------	--------------------------	-------------------------

Long-chain alkyl amine	Proprietary	5 - 9.9	T; R23/24 Xn; R22, R48/20 C; R34 R43 N; R50/53	Yes.
Alkyl phosphate	Proprietary	5-9.9	C; R34	Yes.
Mineral Oil	Mixture.	5 - 9.9	Not classified.	No.
Long-chain alkenyl amine	Proprietary	1 - 4.9	Xn; R22 C; R35 N; R50	Yes.

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** : If affected person is fully conscious, give one glass of water to drink. Never give anything by mouth to an unconscious person. Get medical attention if symptoms appear.
- Skin contact** : Wash with soap and water. Get medical attention if irritation occurs.
- 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
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.), sulfur oxides (SO₂, SO₃ etc.), phosphates.
- Flash point** : Closed cup: 76°C (168.8°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. Minimize contact of spilled material with soils to prevent runoff to surface waterways.

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

7. Handling and storage

- Handling** : Do not ingest. 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** : Store in a segregated and approved area. Keep container in a cool, 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 and personal protection

- Engineering controls** : Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapours below their respective 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** : Disposable outer garments when there is the potential for contact with the material.
- Hands** : Hand Protection: Wear chemical resistant gloves. Nitrile gloves of minimum thickness 0.4 mm have an expected breakthrough time of 480 minutes or less when in frequent contact with the product. Due to variable exposure conditions the user must consider that the practical use of a chemical-protective glove in practice may be much shorter than the permeation time above. Manufacturer's directions for use, especially about the minimum thickness and the minimum breakthrough time, must be observed. This information does not replace suitability tests by the end user since glove protection varies depending on the conditions under which the product is used.

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

1) Mineral Oil

OEL United States

ACGIH (United States).
TWA: 5 mg/m³
STEL: 10 mg/m³
OSHA (United States).
TWA: 5 mg/m³

OEL Canada

TWA: 5 mg/m³
STEL: 10 mg/m³

OEL Europe

EH40 (UK) (Europe, 2002).
TWA: 5 mg/m³ 8 hour(s).

OEL Australia

NOHSC (Australia, 2003).
TWA: 5 mg/m³ 8 hour(s).

9. Physical and chemical properties

Physical state and Appearance : Liquid.

Color : Clear. Yellow.

Odor : Aromatic. Mineral oil

Density : 1.08 g/cm³

Specific gravity : 1.082 at 15.6°C

Solubility :

Viscosity : 74 cSt @ 40°C
9 cSt at 100°C

Auto-ignition temperature : Not determined.

Flash point : Closed cup: 76°C (168.8°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: gastrointestinal tract, upper respiratory tract, eyes.

Acute effects

Inhalation : Irritating to respiratory system.
Does not meet EU R37 classification criteria.

Ingestion :
Ingestion may cause gastrointestinal irritation and diarrhea.

Skin contact : Non-irritating to the skin. This product is not classified as a skin sensitizer based on test data of the skin sensitizing ingredient/s at similar or higher concentrations than are present in this product.
Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin.

Eye contact : Irritating to eyes. Based on test data for this or similar products.

Adverse effects : Not determined.

Carcinogenic effects :

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

Not classified or listed by IARC, NTP, OSHA, EU and ACGIH.

Toxicity data

Product/ingredient name	Result	Species	Dose	Exposure
-------------------------	--------	---------	------	----------

Not determined.

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.
- Germany water class** : 2

13. Disposal considerations

- Waste handling and disposal** : Waste must be disposed of in accordance with federal, state and local environmental control regulations.
- European waste catalogue (EWC) Number** : 13-02-05

14. Transport information

Regulatory information	UN number	Proper shipping name	Class	Packing group	Label	Additional information
DOT Classification	NA1993	Combustible liquids, n.o.s. (sulfurized olefins)	Combustible liquid.	III		-
TDG Classification	Not regulated.	-	-	-		-
ADR/RID Class	UN3082	Environmentally hazardous substance, liquid, n.o.s. (Long-chain alkyl amine)	9	III		Hazard identification number 90
IMDG Class	Not regulated.	-	-			-
IATA-DGR Class	Not regulated.	-	-			-
ADG Class	Not regulated.	-	-			-

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 :

- R36- Irritating to eyes.
R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety phrases :

- S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S57- Use appropriate containment to avoid environmental contamination.

Contains :

-

Additional warning phrases :

Contains Long-chain alkyl amine. May produce an allergic reaction.

US regulations

- SARA 313 toxic chemical notification and release reporting (w/w%)** : No SARA 313 chemicals are present above the reporting threshold.
- SARA 311/312 Hazardous Categorization** : SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Fire hazard, Immediate (acute) health hazard
- RQ (Reportable quantity)** : CERCLA: Hazardous substances.: No products were found.
- 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:
2-Propenoic Acid, Ethyl Ester
Ethylene oxide
Propylene oxide
1,4-DIOXANE

Canadian regulations

- WHMIS (Classification)** : Not determined.

International Inventory Status

United States inventory (TSCA 8b): All components are listed or exempted.

Canada inventory: All components are listed or exempted.

Europe inventory: All components are listed or exempted.

Japan inventory (ENCS): All components are listed or exempted.

Australia inventory (AICS): All components are listed or exempted.

Korea inventory (KECI): All components are listed or exempted.

China inventory (IECSC): All components are listed or exempted.

Philippines inventory (PICCS): All components are listed or exempted.

16. Other information**PREPARATION INFORMATION**

Validated by HS&E Department (Tel: +1 804 788 5800) on 4/3/2008.



Date of printing : 4/3/2008.

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.

ADDRESS CONTACT INFORMATION

In the United States and Canada:
Afton Chemical Corporation
500 Spring Street
Richmond, Virginia
USA 23219-2183
Telephone number: 804-788-5800

In Europe:
Afton Chemical Limited
Euro-Tech Centre
London Road, Bracknell, Berkshire
RG12 2UW, England
44-1344-304141

In Singapore:
111 Somerset Road
#09-05
Singapore Power Building
Singapore 238164
Telephone number: 65-6732-0822

In Japan:
Afton Chemical Japan Corporation
Sumitomo Fudousan Sanbancho Bldg. 5F
6-26 Sanbancho, Chiyoda-ku
Tokyo 102-0075 Japan
Emergency phone: 81-3-5210-4890

In Australia:
Afton Chemical Asia Pacific Company
Level 9, 20 Berry Street
North Sydney, NSW 2060
Australia
Telephone number: 02-9923-1588
Business Hours: 9:00am - 5:00pm

***** END OF MSDS *****