



Material Safety Data Sheet

HiTEC 523 Performance Additive

MSDS no. H523

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

1. Product and company identification

Product use Petrochemical industry: Specialty Additive

Date of issue/Revisions 7 January 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: Classified as hazardous according to the criteria of NOHSC and classified as dangerous goods according to the ADG Code.

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

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 | 1 |
| Reactivity | 0 |

3. Composition and information on ingredients

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

Substance/Preparation : Preparation

| Ingredient name | CAS no. | Conc. (% w/w) | EU Classification | WHMIS Regulated? |
|---|-------------|---------------|---|------------------|
| Zinc dialkyl dithiophosphate | 68649-42-3 | 30 - 60 | Xi; R36/38 | Yes. |
| Mineral Oil | Mixture. | 20 - 30 | Not classified. | No. |
| Alkyl phenol | Proprietary | 10 - 19.9 | N; R50/53 | No. |
| Calcium long-chain alkylphenate sulfide | Proprietary | 1 - 4.9 | R53 | No. |
| Calcium alkaryl sulfonate | Proprietary | 1 - 4.9 | Xi; R36/38 | Yes. |
| Phenol, 4-dodecyl | 104-43-8 | 0.1-0.5 | Repr.Cat. 3;R62 Xi; R38 N; R50/53 | 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 if symptoms appear.
- 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** : 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.
- Hazardous decomposition products** : Decomposition products may include the following materials: carbon oxides (CO, CO₂), sulfur oxides (SO₂, SO₃...). Some metallic oxides. Hydrogen Sulfide
- Flash point** : Closed cup: 100°C (212°F). (Minimum Pensky-Martens.)

6. Accidental release measures

- Personal precautions** : Immediately contact emergency personnel. Keep unnecessary personnel away. Use suitable protective equipment (section 8). Follow all fire-fighting procedures (section 5).
- 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** : Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.
- Storage** : Keep container tightly closed. Keep container in a cool, well-ventilated area.

8. Exposure controls and 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** : Use chemical resistant, impervious gloves.
- 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

| <u>Ingredient name</u> | <u>OEL United States</u> | <u>OEL Canada</u> | <u>OEL Europe</u> | <u>OEL Australia</u> |
|--|---|--|---|--|
|  Mineral Oil | ACGIH (United States). TWA: 5 mg/m ³ STEL: 10 mg/m ³ OSHA (United States). TWA: 5 mg/m ³ | TWA: 5 mg/m ³ STEL: 10 mg/m ³ | EH40 (UK) (Europe, 2002). TWA: 5 mg/m ³ 8 hour(s). | NOHSC (Australia, 2003). TWA: 5 mg/m ³ 8 hour(s). |

9. Physical and chemical properties

- Physical state and Appearance** : Liquid. (Oily liquid.)
- Color** : Brown.
- Density** : 0.99 g/cm³ at 15°C
- Specific gravity** : 0.991 @ 15.6/15.6°C
- Viscosity** : 66 cSt @ 40°C
78 cSt @ 100°C
- Auto-ignition temperature** : Not determined.

| | | | | | | |
|-----------------------|--------|--|---|-----|--|---|
| ADR/RID Class | UN3082 | Environmentally hazardous substance, liquid, n.o.s. (contains 2,6-di-tert-butylphenol) | 9 | III |  | Hazard identification number 90 |
| IMDG Class | UN3082 | Environmentally hazardous substance, liquid, n.o.s. (contains 2,6-di-tert-butylphenol). Marine pollutant | 9 | III |   | Marine pollutant Marine pollutant (P) |
| IATA-DGR Class | UN3082 | Environmentally hazardous substance, liquid, n.o.s. (contains 2,6-di-tert-butylphenol) | 9 | III |  | - |
| ADG Class | UN3082 | Environmentally hazardous substance, liquid, n.o.s. (contains 2,6-di-tert-butylphenol) | 9 | 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 :

R36/38- Irritating to eyes and skin.
 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.
 S28- After contact with skin, wash immediately with plenty of [***]. water.
 S57- Use appropriate containment to avoid environmental contamination.

US regulations

SARA 313 toxic chemical notification and release reporting (w/w%) :

Zinc dialkyl dithiophosphate 30 - 60

SARA 311/312 Hazardous Categorization :

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

RQ (Reportable quantity) :

ERCLA: Hazardous substances.: ISOBUTANOL: 5000 lbs. (2270 kg); Naphthalene: 100 lbs. (45.4 kg); Ethylenediamine: 5000 lbs. (2270 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:
 Naphthalene
 ARSENIC
 CADMIUM

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): At least one component is not listed.

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 1/7/2008.

Date of printing : 1/14/2008.

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

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Australia
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*** END OF MSDS ***