



# Safety Data Sheet

**HiTEC® 646 Performance Additive**

**SDS no.** H646

**Date of issue/Date of revision** 1/9/2023

## Section 1. Identification

**GHS product identifier** : HiTEC® 646 Performance Additive  
**Product use** : Petrochemical industry: Dispersant

### 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** : While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

**Classification of the substance or mixture** : Not classified.

**GHS label elements**

**Signal word** : No signal word.

**Hazard statements** : No known significant effects or critical hazards.

**Precautionary statements**

**Prevention** : Not applicable.

**Response** : Not applicable.

**Storage** : Store in a well-ventilated place.

**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
Distillates (petroleum), hydrotreated heavy paraffinic	64742-54-7	≥25 - ≤35	Not classified.

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** : 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. Get medical attention if irritation occurs.
- Inhalation** : If inhaled, remove to fresh air. Get medical attention if symptoms occur. 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 if symptoms occur.
- Ingestion** : Wash out mouth with water. 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. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

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

#### Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : No known significant effects or critical hazards.

#### Over-exposure signs/symptoms

- Eye contact** : No specific data.
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : No specific data.

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

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.

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<sub>2</sub>.
- Unsuitable extinguishing media** : Do not use water jet.

## Section 5. Fire-fighting measures

- Specific hazards arising from the chemical** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide
- 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.
- 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. 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).

### Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. 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. 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. 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).
- 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 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. 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
Distillates (petroleum), hydrotreated heavy paraffinic	<b>OSHA PEL (United States, 5/2018). [Oil mist, mineral]</b> TWA: 5 mg/m <sup>3</sup> 8 hours. <b>ACGIH TLV (United States, 1/2022). [Mineral Oil, pure, highly and severely refined]</b> TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Inhalable fraction

### Appropriate engineering controls

: Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

### 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: safety glasses with side-shields.

### Skin protection

#### Hand protection

: 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.

#### 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.

#### 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. [Viscous]
Color	: Brown. [Dark]
Odor	: Amine-like. [Slight]
Odor threshold	: Not available.
pH	: Not available.
Melting point	: Not available.
Boiling point	: Not available.
Flash point	: Closed cup: 150°C (302°F) [Minimum Pensky-Martens]
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	: 0.927 g/cm <sup>3</sup> [59°F (15°C)]
Relative density	: 0.927
Solubility(ies)	:

Media	Result
cold water	Not soluble

Partition coefficient: n-octanol/water	: Not applicable.
Auto-ignition temperature	: Not available.
Decomposition temperature	: Not available.
Viscosity	: Kinematic (40°C (104°F)): 10000 mm <sup>2</sup> /s (10000 cSt) Minimum 355 cSt at 100°C
Explosive properties	: Not available.
Oxidizing properties	: 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	: High temperatures, sparks and open flames.
Incompatible materials	: Strong oxidizing and reducing agents.
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
Distillates (petroleum), hydrotreated heavy paraffinic	403 Acute Inhalation Toxicity	LC50 Inhalation Dusts and mists	Rat	>5.53 mg/l	4 hours	Based on data for a similar substance.
	402 Acute Dermal Toxicity	LD50 Dermal	Rabbit	>5000 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.

**Conclusion/Summary** : Not available.

#### Irritation/Corrosion

Product/ingredient name	Test	Species	Result	Remarks
Distillates (petroleum), hydrotreated heavy paraffinic	405 Acute Eye Irritation/Corrosion	Rabbit	Eyes - Not an Irritant	Based on data for a similar substance.
	404 Acute Dermal Irritation/Corrosion	Rabbit	Skin - Not an Irritant	Based on data for a similar substance.

#### Conclusion/Summary

**Skin** : Not available.

**Eyes** : Not available.

**Respiratory** : Not available.

#### Sensitization

Product/ingredient name	Test	Route of exposure	Species	Result	Remarks
Distillates (petroleum), hydrotreated heavy paraffinic	406 Skin Sensitization	skin	Guinea pig	Not sensitizing	Based on data for a similar substance.

#### Conclusion/Summary

**Skin** : Not available.

**Respiratory** : Not available.

#### Mutagenicity

Product/ingredient name	Test	Experiment	Result	Remarks
Distillates (petroleum), hydrotreated heavy paraffinic	471 Bacterial Reverse Mutation Test	Experiment: In vitro Subject: Bacteria	Negative	Based on data for a similar substance.
	473 <i>In vitro</i> Mammalian Chromosomal Aberration Test	Experiment: In vitro Subject: Mammalian-Animal	Negative	Based on data for a similar substance.
	476 <i>In vitro</i> Mammalian Cell Gene Mutation Test	Experiment: In vitro Subject: Mammalian-Animal	Negative	Based on data for a similar substance.
	474 Mammalian Erythrocyte Micronucleus Test	Experiment: In vivo Subject: Mammalian-Animal	Negative	Based on data for a similar substance.

**Conclusion/Summary** : Not available.

#### Carcinogenicity

Product/ingredient name	Test	Species	Exposure	Result	Remarks
Distillates (petroleum), hydrotreated heavy paraffinic	451 Carcinogenicity Studies	Mouse	78 weeks	Negative - Dermal - NOAEL	Based on data for a similar substance.

**Conclusion/Summary** : Not available.

#### Classification

## Section 11. Toxicological information

### Reproductive toxicity

Product/ingredient name	Test	Route of exposure	Species	Maternal toxicity	Fertility	Development toxin	Remarks
Distillates (petroleum), hydrotreated heavy paraffinic	421 Reproduction/ Developmental Toxicity Screening Test	Oral	Rat	Negative	Negative	Negative	Based on data for a similar substance.

**Conclusion/Summary** : Not available.

### Teratogenicity

Product/ingredient name	Test	Species	Result	Remarks
Distillates (petroleum), hydrotreated heavy paraffinic	414 Prenatal Developmental Toxicity Study	Rat	Negative - Dermal	Based on data for a similar substance.

**Conclusion/Summary** : Not available.

### Specific target organ toxicity (single exposure)

Not available.

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

**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** : No known significant effects or critical hazards.  
**Skin contact** : No known significant effects or critical hazards.  
**Ingestion** : No known significant effects or critical hazards.

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

**Eye contact** : No specific data.  
**Inhalation** : No specific data.  
**Skin contact** : No specific data.  
**Ingestion** : No specific data.

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

**Potential immediate effects** : Inhalation of oil mist or vapors at elevated temperatures may cause respiratory irritation. Ingestion may cause gastrointestinal irritation and diarrhea.  
**Potential delayed effects** : Not available.

#### Long term exposure

**Potential immediate effects** : Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin.  
**Potential delayed effects** : Not available.

### Potential chronic health effects

## Section 11. Toxicological information

Product/ingredient name	Test	Species	Dose	Exposure	Result	Remarks
Distillates (petroleum), hydrotreated heavy paraffinic	408 Repeated Dose 90-Day Oral Toxicity Study in Rodents	Rat	125 mg/kg	-	Sub-chronic LOAEL Oral	Based on data for a similar substance.
	410 Repeated Dose Dermal Toxicity: 21/28-day Study	Rabbit	1000 mg/kg	-	Sub-acute NOAEL Dermal	Based on data for a similar substance.
	411 Subchronic Dermal Toxicity: 90-day Study	Rat	30 mg/kg	-	Sub-chronic NOAEL Dermal	Based on data for a similar substance.
	None available.	Rat	0.15 mg/l	13 weeks	Sub-chronic NOAEL Inhalation Dusts and mists	Based on data for a similar substance.
	None available.	Rat	0.22 mg/l	4 weeks	Sub-chronic NOAEL Inhalation Dusts and mists	Based on data for a similar substance.

<b>Conclusion/Summary</b>	: Not available.
<b>General</b>	: No known significant effects or critical hazards.
<b>Carcinogenicity</b>	: No known significant effects or critical hazards.
<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
Distillates (petroleum), hydrotreated heavy paraffinic	Acute EL50 >10000 mg/l	Daphnia - Daphnia magna	48 hours	Based on data for a similar substance.
	Acute LL50 >100 mg/l	Fish - Pimephales promelas	96 hours	Based on data for a similar substance.
	Chronic NOEL ≥100 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours	Based on data for a similar substance.
	Chronic NOEL 10 mg/l	Daphnia - Daphnia magna	21 days	Based on data for a similar substance.
	Chronic NOEL 1000 mg/l	Fish - Oncorhynchus mykiss	14 days	Based on data for a similar substance. QSAR result.

### Persistence and degradability



## Section 12. Ecological information

Product/ingredient name	Test	Result	Remarks
Distillates (petroleum), hydrotreated heavy paraffinic	OECD 301F Ready Biodegradability - Manometric Respirometry Test	31 % - Not readily - 28 days	Based on data for a similar substance.

### Bioaccumulative potential

Not available.

## 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. Empty containers or liners may retain some product residues. 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	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-
Transport hazard class(es)	-	-	-	-
Packing group	-	-	-	-
Environmental hazards	No.	No.	No.	No.

This product is classified as non hazardous for transport when shipped in non-bulk quantities but when shipped in bulk by road, rail or sea may be classified as UN3257, Elevated temperature liquid, n.o.s. (Polyolefin amide alkyleneamine; Petroleum distillates), 9, III

**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.

**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.

## 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

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

##### Name on list

None of the components are listed.

##### Status

##### Ref. number

#### SARA 302/304

##### Composition/information on ingredients

None of the components are listed.

**SARA 304 RQ** : Not applicable.

**CERCLA** : CERCLA: Hazardous substances.: None of the components are listed.

#### SARA 311/312

**Classification** : Not applicable.

##### Composition/information on ingredients

Name	%	Classification
Distillates (petroleum), hydrotreated heavy paraffinic	≥25 - ≤35	HNOC - Static-accumulating flammable liquid

#### SARA 313

No SARA 313 chemicals are present above the reporting threshold.

#### State - California Prop. 65

Not listed.

### Canadian regulations

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

**Canadian NPRI** : None of the components are listed.

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

### International Inventory Status

**Australia** : All components are listed or exempted.

**Canada** : All components are listed or exempted.

**China** : All components are listed or exempted.

**Europe** : For information on compliance with this regulation please contact your Afton representative (EHS.CustomerVolumes@AftonChemical.com).

**Japan** : All components are listed or exempted.

**Republic of Korea** : All components are listed or exempted.

**New Zealand** : All components are listed or exempted.

## Section 15. Regulatory information

Philippines	: All components are listed or exempted.
Switzerland	: For information on compliance with this regulation please contact your Afton representative (EHS.CustomerVolumes@AftonChemical.com).
Turkey	: For information on compliance with this regulation please contact your Afton representative (EHS.CustomerVolumes@AftonChemical.com).
Taiwan	: All components are listed or exempted.
United Kingdom (UK)	: For information on compliance with this regulation please contact your Afton representative (EHS.CustomerVolumes@AftonChemical.com).
United States Active	: All components are active or exempted.

## Section 16. Other information

### History

Date of issue/Date of revision : 1/9/2023

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.*