

Safety Data Sheet

SDS no. H637

Date of issue/Date of 5/4/2019 revision

Section 1. Identification

GHS product identifier : HiTEC® 637 Performance Additive Product use : Petrochemical industry: Dispersant

In case of emergency - Chemical

+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

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Suite 101

Burlington, ON L7L 5Y7

905-631-5470

Section 2. Hazards identification

OSHA/HCS status

: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture

: SKIN IRRITATION - Category 2

GHS label elements

Hazard pictograms



Signal word : Warning

Hazard statements: Causes skin irritation.

Precautionary statements

Prevention: Wear protective gloves. Wash hands thoroughly after handling.

Response : IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and

wash it before reuse. If skin irritation occurs: Get medical attention.

Storage : Store in well-ventilated place.

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

international regulations.

Additional hazards : None known.

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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	≥15 - ≤25	Not classified.
Alkoxylated long-chain alkanol borate	Proprietary	≥10 - ≤15	ACUTE TOXICITY (oral) - Category 4 SKIN IRRITATION - Category 2 SERIOUS EYE DAMAGE - Category 1
phosphorous acid	10294-56-1	≥1 - ≤3	CORROSIVE TO METALS - Category 1 ACUTE TOXICITY (oral) - Category 4 SKIN CORROSION - Category 1A SERIOUS EYE DAMAGE - Category 1

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. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation

: If inhaled, remove to fresh air. 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 adverse health effects persist or are severe. 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

: 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. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. 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 contactInhalationNo known significant effects or critical hazards.No known significant effects or critical hazards.

Skin contact: Causes skin irritation.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

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Section 4. First aid measures

Eye contact : Adverse symptoms may include the following:

> pain or irritation watering redness

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:

> irritation redness

: No specific data. Ingestion

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. 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

Unsuitable extinguishing

media

Specific hazards arising from the chemical

Hazardous thermal decomposition products : In a fire or if heated, a pressure increase will occur and the container may burst.

: Decomposition products may include the following materials: carbon dioxide

: In case of fire, use water spray (fog), foam, dry chemical or CO₂.

carbon monoxide nitrogen oxides phosphorus oxides

: Do not use water jet.

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. 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 nonemergency 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).

Section 6. Accidental release measures

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.

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Large spill

Stop leak if without risk. Move containers from spill area. 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). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. 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.

including any incompatibilities

Conditions for safe storage, : 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
	OSHA PEL (United States, 6/2016). TWA: 5 mg/m³ 8 hours. ACGIH TLV (United States, 3/2017). TWA: 5 mg/m³ 8 hours. Form: Inhalable fraction

Appropriate engineering controls

Environmental exposure controls

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

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Section 8. Exposure controls/personal protection

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.

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 liquid.]

Color : Brown.

Odor : Not available.
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 : Not available.

(flammable) limits

Vapor pressure : Not available.
Vapor density : Not available.
Density : 0.96 g/cm³
Relative density : 0.959

Solubility : Insoluble in the following materials: cold water.

Partition coefficient: n- : N

octanol/water

: Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Kinematic (40°C): 125 cm²/s

Viscosity : 400 cSt @ 100°C

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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	-
	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.
Alkoxylated long-chain alkanol borate	402 Acute Dermal Toxicity	LD50 Dermal	Rat	>2000 mg/kg	-	Based on data for a similar substance.
	None available.	LD50 Oral	Rat	1000 mg/kg	-	Based on data for a similar substance.
phosphorous acid	-	LD50 Oral	Rat	1570 mg/kg	-	-

Conclusion/Summary

: Not available.

Irritation/Corrosion

Product/ingredient name	Test	Species	Result	Remarks
Distillates (petroleum), hydrotreated heavy paraffinic	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.
Alkoxylated long-chain alkanol borate	None available.	Rabbit	Skin - Irritant	Based on data for a similar substance.
	None available.	Rabbit	Eyes - Irritant	Based on data for a similar substance.
phosphorous acid	404 Acute Dermal Irritation/Corrosion	Rabbit	Skin - Visible necrosis	Based on data for a similar substance.

Conclusion/Summary

Skin : Causes skin irritation.

Eyes: Non-irritating to the eyes. Based on test data for this or similar products.

Respiratory: Not available.

Sensitization

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Product/ingredient name	Test	Route of exposure	Species	Result	Remarks
, ,	406 Skin Sensitization None available.	skin	Guinea pig Guinea pig	sensitizing Not	Based on data for a similar substance. 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.
Alkoxylated long-chain alkanol borate	None available.	Experiment: In vitro Subject: Bacteria	Negative	Based on data for a similar substance.
	None available.	Experiment: In vitro Subject: Mammalian-Animal	Negative	Based on data for a similar substance.
phosphorous acid	471 Bacterial Reverse Mutation Test	Experiment: In vitro Subject: Bacteria	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.
	487 <i>In vitro</i> Micronucleus Test	Experiment: In vitro Subject: Mammalian-Human	Negative	Based on data for a similar substance.

Conclusion/Summary

Carcinogenicity

Conclusion/Summary

: Not available.

: Not available.

Classification

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.
Alkoxylated long-chain alkanol borate	None available.	Oral	Rat	Negative	Negative	Negative	Based on data for a similar substance.
phosphorous acid	422 Combined Repeated Dose Toxicity Study with the Reproduction/ Developmental Toxicity Screening Test	Oral	Rat	Negative	Negative	Negative	Based on data for a similar substance.

Conclusion/Summary

: Not available.

Teratogenicity

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Product/ingredient name	Test	Species	Result	Remarks
hydrotreated heavy paraffinic	414 Prenatal Developmental Toxicity Study			Based on data for a similar substance.
Alkoxylated long-chain alkanol borate	None available.	Rat		Based on data for a similar substance.

Conclusion/Summary: Not available.

Information on the likely routes of exposure

: Skin, Eyes, Ingestion, and Inhalation

Potential acute health effects

Eye contactInhalationNo known significant effects or critical hazards.No known significant effects or critical hazards.

Skin contact: Causes skin irritation.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:

pain or irritation watering redness

Inhalation : No specific data.

Skin contact: Adverse symptoms may include the following:

irritation redness

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

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.
	411 Subchronic Dermal Toxicity: 90-day Study	Rat - Female	30 mg/kg	-	Sub-chronic NOAEL Dermal	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.
	None available.	Rat	0.22 mg/l	4 weeks	Sub-chronic NOAEL Inhalation Dusts and mists	Based on data for a similar substance.
	None available.	Rat	0.15 mg/l	13 weeks	Sub-chronic NOAEL Inhalation	Based on data for a similar substance.

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					Dusts and mists	
Alkoxylated long-chain alkanol borate	None available.	Rat	195 mg/kg	-	Sub-acute LOAEL Oral	Based on data for a similar substance.
	None available.	Rat	500 mg/kg	-	Sub-chronic NOAEL Dermal	Based on data
phosphorous acid	422 Combined Repeated Dose Toxicity Study with the Reproduction/ Developmental Toxicity Screening Test	Rat	250 mg/kg	-	Sub-acute NOAEL Oral	Based on data for a similar substance.

Conclusion/Summary

General

: Not available.: No known significant effects or critical hazards.

Carcinogenicity

: No known significant effects or critical hazards.

Mutagenicity

: No known significant effects or critical hazards.

Teratogenicity

: No known significant effects or critical hazards.

Developmental effects
Fertility effects

No known significant effects or critical hazards.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/	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	QSAR result.
Alkoxylated long-chain alkanol borate	Acute EL50 0.41 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours	Based on data for a similar substance.
	Acute EL50 0.39 mg/l	Daphnia - Daphnia magna	48 hours	Based on data for a similar substance.
	Acute EL50 >2 mg/l	Micro-organism - Pseudomonas putida	5 hours	Based on data for a similar substance.
	Acute LC50 0.876 mg/l	Fish - Danio rerio	96 hours	Based on data for a similar substance.
	Chronic NOEC 0.77 mg/l	Daphnia - Daphnia magna	21 days	Based on data for a similar substance.

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	Chronic NOEC 0.16	Fish - Pimephales promelas	10 days	Based on data for a similar
	mg/l			substance.
	Chronic NOEL 0.31	Algae - Pseudokirchneriella	72 hours	Based on data
	mg/l	subcapitata		for a similar substance.
phosphorous acid	Acute EL50 153 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours	-
	Acute EL50 >1000 mg/l	Daphnia - Daphnia magna	48 hours	-
	Acute LL50 >100 mg/	Fish - Cyprinus carpio	96 hours	-
	Chronic EL10 9 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours	-

Conclusion/Summary

: Toxic to aquatic life.

Persistence and degradability

Product/ingredient name	Test	Result		Remarks	
Distillates (petroleum), hydrotreated heavy paraffinic Alkoxylated long-chain alkanol borate	OECD 301F Ready Biodegradability - Manometric Respirometry Test OECD 301F Ready Biodegradability - Manometric Respirometry Test	31 % - Not readily - 28 days 95 % - Readily - 28 days		Based on data for a similar substance. Based on data for a similar substance.	
Product/ingredient name	Aquatic half-life		Photolysis		Biodegradability
Distillates (petroleum), hydrotreated heavy paraffinic Alkoxylated long-chain alkanol borate	-		-		Not readily Readily

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. 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. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

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Section 14. Transport information

Regulatory information	UN number	Proper shipping name	Class	Packing group	Label	Additional information
DOT Classification	Not regulated.	-	-	-		-
TDG Classification	Not regulated.	-	-	-		-
IMDG Class	Not regulated.	-	-	-		-
IATA-DGR 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.

Section 15. Regulatory information

U.S. Federal regulations

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 311/312

Classification : SKIN IRRITATION - Category 2

Composition/information on ingredients

Name	%	Classification
Alkoxylated long-chain alkanol borate	≥10 - ≤15	ACUTE TOXICITY (oral) - Category 4 SKIN IRRITATION - Category 2 SERIOUS EYE DAMAGE - Category 1
phosphorous acid	≥1 - ≤3	CORROSIVE TO METALS - Category 1 ACUTE TOXICITY (oral) - Category 4 SKIN CORROSION - Category 1A SERIOUS EYE DAMAGE - Category 1

SARA 313

No SARA 313 chemicals are present above the reporting threshold.

RQ (Reportable quantity) : CERCLA: Hazardous substances.: No products were found.

<u>United States - TSCA 12(b) - Chemical export notification</u>

List name Status Name on list Ref. number

None of the components are listed.

State - California Prop. 65

Not listed.

Canadian regulations %

Canadian NPRI : None of the components are listed.

CEPA Toxic substances : None of the components are listed.

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Section 15. Regulatory information

International Inventory Status

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 : All components are listed or exempted.

Korea

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

: 5/4/2019

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.