



Safety Data Sheet

HiTEC® 5200 Performance Additive

SDS no. H5200

Date of issue/Date of revision 10/19/2020

Section 1. Identification

GHS product identifier : HiTEC® 5200 Performance Additive
Product use : Petrochemical industry: Lubricating Oil Additive.

In case of emergency - Chemical

0800-70-77-022 (Brazil)
01-800-681-9531 (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 : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the substance or mixture : TOXIC TO REPRODUCTION (Fertility) - Category 2
TOXIC TO REPRODUCTION (Unborn child) - Category 2

GHS label elements

Hazard pictograms :



Signal word : Warning
Hazard statements : Suspected of damaging fertility. Suspected of damaging the unborn child.

Precautionary statements

Prevention : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing and eye or face protection.
Response : IF exposed or concerned: Get medical advice or attention.
Storage : Store locked up. Store in a well-ventilated place.
Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.
Supplemental label elements : Avoid contact with skin and clothing. Wash thoroughly after handling.
Additional hazards : Prolonged or repeated contact may dry skin and cause irritation.

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	≥3 - ≤5	Not classified.
Solvent naphtha (petroleum), heavy arom.	64742-94-5	≥1 - ≤3	ASPIRATION HAZARD - Category 1
Long-chain alkenyl amide	68478-81-9	≥0.5 - <1	SKIN IRRITATION - Category 2 TOXIC TO REPRODUCTION (Fertility) - Category 2 TOXIC TO REPRODUCTION (Unborn child) - Category 2
methyl-1H-benzotriazole	29385-43-1	≥0.1 - ≤0.3	ACUTE TOXICITY (oral) - Category 4 TOXIC TO REPRODUCTION (Unborn child) - Category 2

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 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. If not breathing, give artificial respiration. If breathing is difficult, administer oxygen.
- Skin contact** : Wash skin thoroughly with soap and water or use recognized skin cleanser. 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. 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 contact** : No known significant effects or critical hazards.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Defatting to the skin. May cause skin dryness and irritation.
- Ingestion** : No known significant effects or critical hazards.

Over-exposure signs/symptoms

- Eye contact** : No specific data.

Section 4. First aid measures

- Inhalation** : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:
irritation
dryness
cracking
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

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. 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** : In case of fire, use water spray (fog), foam, dry chemical or CO₂.
- Unsuitable extinguishing media** : Do not use water jet.

- 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. 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 non-emergency personnel".

Section 6. Accidental release measures

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. 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). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. 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.

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. Store locked up. 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	ACGIH TLV (United States, 3/2019). TWA: 5 mg/m ³ 8 hours. Form: Inhalable fraction OSHA PEL (United States, 5/2018). TWA: 5 mg/m ³ 8 hours.

Section 8. Exposure controls/personal protection

Appropriate engineering controls	: If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
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.
<u>Individual protection measures</u>	
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.
<u>Skin protection</u>	
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. [Clear.]
Color	: Amber.
Odor	: Not available.
Odor threshold	: Not available.
pH	: Not available.
Melting point	: Not available.
Boiling point	: Not available.
Flash point	: Closed cup: 120°C (248°F) [Pensky-Martens. Minimum]
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	: 0.913 g/cm ³

Section 9. Physical and chemical properties

Relative density	: 0.915
Solubility	: Not available.
Partition coefficient: n-octanol/water	: Not available.
Auto-ignition temperature	: Not available.
Decomposition temperature	: Not available.
Viscosity	: Kinematic (40°C (104°F)): 0.28 cm ² /s (28 cSt) 5.6 cSt @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 Vapor	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.
Solvent naphtha (petroleum), heavy arom.	403 Acute Inhalation Toxicity	LC50 Inhalation Vapor	Rat	>5.28 mg/m ³	4 hours	Based on data for a similar substance.
	402 Acute Dermal Toxicity	LD50 Dermal	Rabbit	>2000 mg/kg	-	Based on data for a similar substance.
	420 Acute Oral Toxicity - Fixed Dose Method	LD50 Oral	Rat	>5000 mg/kg	-	Based on data for a similar substance.
Long-chain alkenyl amide methyl-1H-benzotriazole	None available.	LD50 Oral	Rat	10400 mg/kg	-	-
	None available.	LC50 Inhalation Vapor	Rat	>1730 mg/m ³	1 hours	-
	402 Acute Dermal Toxicity	LD50 Dermal	Rabbit	>2000 mg/kg	-	Based on data for a similar substance.

Section 11. Toxicological information

	401 Acute Oral Toxicity	LD50 Oral	Rat	720 mg/kg	-	-
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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 - Not an Irritant	Based on data for a similar substance.
	405 Acute Eye Irritation/Corrosion	Rabbit	Eyes - Not an Irritant	Based on data for a similar substance.
Solvent naphtha (petroleum), heavy arom.	None available.	Rabbit	Eyes - Not an Irritant	Based on data for a similar substance.
	None available.	Rabbit	Skin - Not an Irritant	-
Long-chain alkenyl amide	405 Acute Eye Irritation/Corrosion	Rabbit	Eyes - Not an Irritant	-
	-	Rabbit	Skin - Irritant	-
methyl-1H-benzotriazole	404 Acute Dermal Irritation/Corrosion	Rabbit	Skin - Not an Irritant	-
	405 Acute Eye Irritation/Corrosion	Rabbit	Eyes - Not an Irritant	-

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.
Solvent naphtha (petroleum), heavy arom.	406 Skin Sensitization	skin	Guinea pig	Not sensitizing	Based on data for a similar substance.
Long-chain alkenyl amide	406 Skin Sensitization	skin	Guinea pig	Not sensitizing	-
methyl-1H-benzotriazole	406 Skin Sensitization	skin	Guinea pig	Not sensitizing	-

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.
Solvent naphtha (petroleum), heavy arom.	471 Bacterial Reverse Mutation Test	Experiment: In vitro Subject: Bacteria	Negative	Based on data for a similar substance.
	479 Genetic Toxicology: <i>In vitro</i> Sister Chromatid Exchange Assay in Mammalian Cells	Experiment: In vitro Subject: Mammalian-Animal	Negative	Based on data for a similar substance.
Long-chain alkenyl amide	471 Bacterial Reverse	Experiment: In vitro	Negative	-

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methyl-1H-benzotriazole	Mutation Test 490 <i>In vitro</i> Mammalian Cell Gene Mutation Tests Using the Thymidine Kinase Gene	Subject: Bacteria Experiment: In vitro Subject: Mammalian-Animal	Negative	-
	473 <i>In vitro</i> Mammalian Chromosomal Aberration Test	Experiment: In vitro Subject: Mammalian-Human	Negative	-
	471 Bacterial Reverse Mutation Test	Experiment: In vitro Subject: Bacteria	Negative	-
	474 Mammalian Erythrocyte Micronucleus Test	Experiment: In vivo Subject: Mammalian-Animal	Negative	-

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

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.
Solvent naphtha (petroleum), heavy arom.	415 One-Generation Reproduction Toxicity Study	Oral	Rat	Positive	Negative	Negative	Based on data for a similar substance.
Long-chain alkenyl amide	422 Combined Repeated Dose Toxicity Study with the Reproduction/ Developmental Toxicity Screening Test	Oral	Rat	Positive	Positive	Positive	-
methyl-1H-benzotriazole	421 Reproduction/ Developmental Toxicity Screening Test	Oral	Rat	Negative	Negative	Negative	Based on data for a similar substance.

Conclusion/Summary : Suspected of damaging fertility or the unborn child. Refer to Section 2.

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.
methyl-1H-benzotriazole	414 Prenatal Developmental Toxicity Study	Rat	Positive - Oral	-

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Not available.			

Section 11. Toxicological information

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Not available.			

Aspiration hazard

Name	Result
Solvent naphtha (petroleum), heavy arom.	ASPIRATION HAZARD - Category 1

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 : Defatting to the skin. May cause skin dryness and irritation.
Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.
Inhalation : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations
Skin contact : Adverse symptoms may include the following:
irritation
dryness
cracking
reduced fetal weight
increase in fetal deaths
skeletal malformations
Ingestion : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

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 411 Subchronic Dermal Toxicity: 90-day Study 410 Repeated Dose Dermal Toxicity: 21/28-day Study None available.	Rat	125 mg/kg	-	Sub-chronic LOAEL Oral	Based on data for a similar substance.
		Rat	30 mg/kg	-	Sub-chronic NOAEL Dermal	Based on data for a similar substance.
		Rabbit	1000 mg/kg	-	Sub-acute NOAEL Dermal	Based on data for a similar substance.
		Rat	0.22 mg/l	4 weeks	Sub-chronic NOAEL Inhalation Dusts and mists	Based on data for a similar substance.
		Rat	0.15 mg/l	13 weeks	Sub-chronic NOAEL Inhalation Dusts and mists	Based on data for a similar substance.
Solvent naphtha (petroleum), heavy arom.	408 Repeated Dose 90-Day Oral Toxicity Study in Rodents 411 Subchronic Dermal Toxicity: 90-day Study 413 Subchronic Inhalation Toxicity: 90-day Study	Rat	750 mg/kg	-	Sub-chronic NOAEL Oral	Based on data for a similar substance.
		Rat	495 mg/kg	-	Sub-chronic NOAEL Dermal	Based on data for a similar substance.
		Rat	1000 mg/m ³	90 days	Sub-chronic NOAEL Inhalation Vapor	Based on data for a similar substance.
Long-chain alkenyl amide	422 Combined Repeated Dose Toxicity Study with the Reproduction/ Developmental Toxicity Screening Test	Rat	75 mg/kg	-	Sub-acute NOAEL Oral	-
methyl-1H-benzotriazole	407 Repeated Dose 28-day Oral Toxicity Study in Rodents	Rat	150 mg/kg	-	Sub-acute NOAEL Oral	-

Conclusion/Summary

: Not available.

General

: Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

Carcinogenicity

: No known significant effects or critical hazards.

Mutagenicity

: No known significant effects or critical hazards.

Teratogenicity

: Suspected of damaging the unborn child.

Developmental effects

: No known significant effects or critical hazards.

Fertility effects

: Suspected of damaging fertility.

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	QSAR result.
Solvent naphtha (petroleum), heavy arom.	Acute EL50 >1 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours	-
	Acute EL50 1.4 mg/l	Daphnia - Daphnia magna	48 hours	Based on data for a similar substance.
	Acute LL50 2 to 5 mg/l	Fish - Oncorhynchus mykiss	96 hours	-
	Chronic NOEL 1 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours	-
	Chronic NOEL 0.48 mg/l	Daphnia - Daphnia magna	21 days	Based on data for a similar substance.
Long-chain alkenyl amide	Acute EL50 496 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours	-
	Acute EL50 >1000 mg/l	Daphnia - Daphnia magna	48 hours	-
	Acute EL50 >1000 mg/l	Micro-organism	3 hours	-
	Acute LL50 >1000 mg/l	Fish - Oncorhynchus mykiss	96 hours	-
	Chronic EL10 318 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours	-
methyl-1H-benzotriazole	Acute EL50 75 mg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours	Based on data for a similar substance.
	Acute EL50 8.58 mg/l Fresh water	Daphnia - Daphnia galeata	48 hours	Based on data for a similar substance.
	Acute EL50 1060 mg/l	Micro-organism	24 hours	Based on data for a similar substance.
	Acute LL50 180 mg/l Fresh water	Fish - Danio rerio	96 hours	Based on data for a similar substance.
	Chronic EL10 1.18 mg/l Fresh water	Algae - Desmodesmus subspicatus	72 hours	Based on data for a similar substance.
	Chronic EL10 0.4 mg/l Fresh water	Daphnia - Daphnia galeata	21 days	Based on data for a similar substance.

Conclusion/Summary : Harmful to aquatic life with long lasting effects. Toxic to aquatic organisms.

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.
Solvent naphtha (petroleum), heavy arom.	OECD 301F Ready Biodegradability - Manometric Respirometry Test	58.6 % - Inherent - 28 days	Based on data for a similar substance.
Long-chain alkenyl amide	OECD 301D Ready Biodegradability - Closed Bottle Test	6.2 % - Not readily - 35 days	-
methyl-1H-benzotriazole	OECD 301F Ready Biodegradability - Manometric Respirometry Test	4 % - Not readily - 28 days	-

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Solvent naphtha (petroleum), heavy arom.	2.8 to 6.5	99 to 5780	high

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.

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)	-	-	-	-

Section 14. Transport information

Packing group	-	-	-	-
Environmental hazards	No.	No.	No.	No.

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.

Additional information

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.

Section 15. Regulatory information

U.S. Federal regulations :

United States - TSCA 12(b) - Chemical export notification

List name

Status

Name on list

Ref. number

None of the components are listed.

CERCLA Reportable quantity : CERCLA: Hazardous substances.: naphthalene: 100 lbs. (45.4 kg); 2-methylpropan-1-ol: 5000 lbs. (2270 kg); ethyl acrylate: 1000 lbs. (454 kg); propylene oxide: 100 lbs. (45.4 kg); ethylene oxide: 10 lbs. (4.54 kg); 1,4-dioxane: 100 lbs. (45.4 kg); toluene: 1000 lbs. (454 kg); benzene: 10 lbs. (4.54 kg); ethylbenzene: 1000 lbs. (454 kg); phenol: 1000 lbs. (454 kg); 1-naphthylamine: 100 lbs. (45.4 kg); 2-naphthylamine: 10 lbs. (4.54 kg); aniline: 5000 lbs. (2270 kg); 1-methylnaphthalene: No RQ is being assigned to the generic or broad class.; 2-methylnaphthalene: No RQ is being assigned to the generic or broad class.; Formaldehyde: 100 lbs. (45.4 kg);

SARA 302/304

Composition/information on ingredients

Name	%	EHS	SARA 302 TPQ		SARA 304 RQ	
			(lbs)	(gallons)	(lbs)	(gallons)
aniline	≤0.01	Yes.	1000	117.6	5000	587.9
Formaldehyde	≤0.0001	Yes.	500	73.9	100	14.8
phenol	≤0.00001	Yes.	500 / 10000	-	1000	-
propylene oxide	≤0.00001	Yes.	10000	1444.3	100	14.4
ethylene oxide	≤0.00001	Yes.	1000	-	10	-

SARA 311/312

Classification : TOXIC TO REPRODUCTION (Fertility) - Category 2
TOXIC TO REPRODUCTION (Unborn child) - Category 2
HNOC - Defatting irritant

Composition/information on ingredients

Name	%	Classification
Distillates (petroleum), hydrotreated heavy paraffinic	≥3 - ≤5	HNOC - Static-accumulating flammable liquid HNOC - Defatting irritant
Solvent naphtha (petroleum), heavy arom.	≥1 - ≤3	ASPIRATION HAZARD - Category 1 HNOC - Defatting irritant
Long-chain alkenyl amide	≥0.5 - <1	HNOC - Static-accumulating flammable liquid SKIN IRRITATION - Category 2 TOXIC TO REPRODUCTION (Fertility) - Category 2 TOXIC TO REPRODUCTION (Unborn child) - Category 2

Section 15. Regulatory information

methyl-1H-benzotriazole	≥0.1 - ≤0.3	ACUTE TOXICITY (oral) - Category 4 TOXIC TO REPRODUCTION (Unborn child) - Category 2
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SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	N-2-naphthylaniline	135-88-6	≤0.01

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State - California Prop. 65



WARNING: This product contains less than 0.1% of a chemical known to the State of California to cause cancer.

WARNING: This product contains less than 1% of a chemical known to the State of California to cause birth defects or other reproductive harm.

Ingredient name	%	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
Naphthalene	<0.1	Yes.	No.	Yes.	-
Aniline	≤0.01	Yes.	No.	Yes.	-
Ethyl acrylate	≤0.001	Yes.	No.	-	-
1-Naphthylamine	≤0.001	Yes.	No.	-	-
2-Naphthylamine	≤0.0001	Yes.	No.	Yes.	-
Formaldehyde	≤0.0001	Yes.	No.	Yes.	-
Propylene oxide	≤0.00001	Yes.	No.	-	-
Ethylene oxide	≤0.00001	Yes.	Yes.	Yes.	Yes.
1,4-Dioxane	≤0.00001	Yes.	No.	Yes.	-
Toluene	≤0.00001	No.	Yes.	-	Yes.
Benzene	≤0.00001	Yes.	Yes.	Yes.	Yes.
Ethylbenzene	≤0.00001	Yes.	No.	Yes.	-

www.P65Warnings.ca.gov.

Canadian regulations

Canadian NPRI : The following components are listed: Heavy aromatic solvent naphtha

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.
Japan	: All components are listed or exempted.
Republic of Korea	: All components are listed or exempted.
New Zealand	: All components are listed or exempted.
Philippines	: All components are listed or exempted.
Taiwan	: All components are listed or exempted.
United States Active	: All components are active 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 : 10/19/2020

Prepared by : EHS Department (Tel: +1 804 788 5800)

Section 16. Other information

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.