

1. Product and Company Identification

Product identifier	Asphaltene Conditioner Base	
Version #	01	
Issue date	04-21-2015	
CAS #	Mixture	
Product code	CC2549, CC2550, CC2597, CC2598	
MSDS Number	LT16605	
Product use	Diesel Fuel Additive	
Manufacturer information	Cummins Filtration 1200 Fleetguard Road Cookeville, TN 38506 United States 24 Hours per day	
		1-800-22FILTER (1-800-223-4583) Chemtrec 1-800-424-9300 Chemtrec 703-527-3887
Supplier	Refer to Manufacturer	

2. Hazards Identification

Emergency overview	<p>WARNING</p> <p>Combustible liquid and vapor. May be harmful or fatal if swallowed. Aspiration hazard. Harmful if inhaled. May cause respiratory irritation. May cause central nervous system effects. May cause skin irritation. Contains material which can cause damage to the blood system, the liver, and the kidneys. Possible cancer hazard - may cause cancer based on animal data.</p>
Potential health effects	
Routes of exposure	Inhalation. Skin contact. Skin absorption. Ingestion.
Eyes	May cause mild eye irritation.
Skin	May cause mild to moderate skin irritation. Skin absorption: May be absorbed through the skin, producing symptoms similar to ingestion or inhalation.
Inhalation	May cause irritation of respiratory tract. May cause central nervous system effects.
Ingestion	Aspiration hazard. May cause irritation of the gastrointestinal tract.
Target organs	Blood. Central nervous system. Eyes. Kidneys. Liver. Respiratory system. Skin.
Chronic effects	Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. Contains: Naphthalene. Repeated overexposure to naphthalene may cause destruction of red blood cells with anemia, fever, jaundice and kidney and liver damage.
Most important symptoms/effects, acute and delayed	<p>Aspiration hazard. Aspiration into the lungs during swallowing or subsequent vomiting may cause chemical pneumonitis, which can be fatal.</p> <p>Harmful if inhaled. Symptoms may include upper respiratory irritation, coughing, and breathing difficulties. Symptoms may include pain, headache, nausea, vomiting, dizziness, drowsiness and other central nervous system effects. Could also cause convulsions, coma and respiratory arrest. Suspected of causing cancer. Symptoms may include persistent coughing, shortness of breath, coughing up blood and wheezing.</p> <p>Causes damage to the blood system if swallowed. Contains: Naphthalene Repeated overexposure to naphthalene may cause destruction of red blood cells with anemia, fever, jaundice and kidney and liver damage.</p> <p>May cause mild to moderate skin irritation. May cause redness and pain. Direct eye contact may cause slight or mild, transient irritation. Symptoms may include stinging and tearing.</p> <p>Ingestion of large amounts may cause nausea, vomiting, diarrhea, as well as depression of the central nervous system.</p>
Potential environmental effects	Toxic to aquatic life with long lasting effects. See ECOLOGICAL INFORMATION, Section 12.

3. Composition / Information on Ingredients

Components	CAS #	Percent
Solvent naphtha (petroleum), heavy aromatic	64742-94-5	80 - 100
1,2,4-Trimethylbenzene	95-63-6	1 - 5
Naphthalene	91-20-3	1 - 5
Solvent naphtha (petroleum), light aromatic	64742-95-6	1 - 3
1,3,5-Trimethylbenzene	108-67-8	0.4 - 1
2-Ethylhexyl Alcohol	104-76-7	0.4 - 1

4. First Aid Measures

First aid procedures

Inhalation

Move to fresh air. If breathing is difficult, trained personnel should give oxygen. If breathing stops, provide artificial respiration. Get medical attention if symptoms occur.

Skin contact

Remove contaminated clothing. Wash off immediately with soap and plenty of water. If skin irritation persists, call a physician. Wash contaminated clothing before reuse.

Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if symptoms persist.

Ingestion

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting. If vomiting occurs spontaneously, keep victim's head lowered (forward) to reduce the risk of aspiration. Never give anything by mouth to a victim who is unconscious or is having convulsions.

Notes to physician

Immediate medical attention is required. Aspiration hazard. Provide general supportive measures and treat symptomatically.

General advice

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire Fighting Measures

Flammable properties

Combustible by WHMIS criteria.

Extinguishing media

Suitable extinguishing media

Carbon dioxide (CO₂). Dry chemical powder. Foam. Water fog.

Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

Protection of firefighters

Specific hazards arising from the chemical

Vapors are heavier than air and may spread along floors. Material will float and may ignite on surface of water. The pressure in sealed containers can increase under the influence of heat. Toxic fumes, gases or vapors may evolve on burning.

Protective equipment for firefighters

Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode.

Fire fighting equipment/instructions

Move containers from fire area if you can do so without risk. Use water spray to cool unopened containers. Do not allow run-off from fire fighting to enter drains or water courses. Dike for water control.

Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials.

Explosion data

Sensitivity to static discharge

May be sensitive to static discharge. Vapours in the flammable range may be ignited by a static discharge or sufficient energy.

Sensitivity to mechanical impact

Not expected to be sensitive to mechanical impact.

Hazardous combustion products

Carbon oxides. Hydrocarbons. Aldehydes. Polycyclic aromatic hydrocarbons. Other irritating fumes and smoke.

General fire hazards

Combustible liquid. May be ignited by open flame.

6. Accidental Release Measures

Personal precautions	Restrict access to area until completion of clean-up. Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. For personal protection, see section 8 of the MSDS.
Environmental precautions	Avoid release to the environment. Prevent entry into waterways, sewer, basements or confined areas. If necessary, dike well ahead of the spill to prevent runoff into drains, sewers, or any natural waterway or drinking supply. Contact local authorities in case of spillage to drain/aquatic environment.
Methods and materials for containment and cleaning up	<p>Ventilate the area. Stop leak if you can do so without risk. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Use only non-sparking tools.</p> <p>Small liquid spills: Contain and absorb spilled liquid with non-combustible, inert absorbent material (e.g. sand). Pick up and transfer to properly labeled containers. Never return spills to original containers for re-use. Contaminated absorbent material may pose the same hazards as the spilled product.</p> <p>Large Spills: Use water spray to reduce vapors or divert vapor cloud drift. Contain spilled liquid with non-combustible, inert absorbent material (e.g. sand). Remove with vacuum trucks or pump to storage/salvage vessels. Keep in properly labelled containers. In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.</p> <p>Contact the proper local authorities. For waste disposal, see section 13 of the MSDS.</p>
Other information	Clean up in accordance with all applicable regulations.

7. Handling and Storage

Handling	<p>Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.</p> <p>Use only outdoors or in a well-ventilated area. Do not breathe vapor. Wear appropriate personal protective equipment. Wear protective gloves/clothing and eye/face protection. Avoid contact with eyes, skin, and clothing. Keep away from heat and open flames-No smoking. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Keep away from incompatibles. Keep containers closed when not in use. Empty containers retain residue and can be dangerous. Wash thoroughly after handling.</p>
Storage	Store in tightly closed original container in a dry, cool and well-ventilated place. Store away from incompatible materials (see Section 10 of the MSDS). Inspect periodically for damage or leaks. No smoking in the area. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel.

8. Exposure Controls / Personal Protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value
1,2,4-Trimethylbenzene (CAS 95-63-6)	TWA	25 ppm
1,3,5-Trimethylbenzene (CAS 108-67-8)	TWA	25 ppm
Naphthalene (CAS 91-20-3)	TWA	10 ppm

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Naphthalene (CAS 91-20-3)	PEL	50 mg/m ³ 10 ppm

Biological limit values No biological exposure limits noted for the ingredient(s).

Exposure guidelines

US ACGIH Threshold Limit Values: Skin designation

Naphthalene (CAS 91-20-3) Can be absorbed through the skin.

Engineering controls Use only outdoors or in a well-ventilated area. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Personal protective equipment

Eye/face protection	Wear eye/face protection. Wear as appropriate: Tight fitting safety goggles. Safety glasses. A full face shield may also be necessary. Eye wash fountain is recommended.
Skin protection	Wear suitable protective clothing. Where extensive exposure to product is possible, use resistant coveralls, apron and boots to prevent contact. Eye wash facilities and emergency shower must be available when handling this product.
Respiratory protection	Use a NIOSH/MSHA approved respirator if there is a risk of exposure at levels exceeding the exposure limits. Respirators should be selected based on the form and concentration of contaminants in air, and in accordance with CSA Z94.4-02. Seek advice from respiratory protection specialists.
Hand protection	Wear appropriate chemical-resistant gloves. Advice should be sought from glove suppliers.

9. Physical & Chemical Properties

Appearance

Physical state	Liquid.
Form	Watery liquid.
Color	Amber.
Odor	Hydrocarbon-like.
Odor threshold	Not available.
pH	Not available.
Vapor pressure	Not available.
Vapor density	> 1 (Air = 1)
Boiling point	> 300.02 °F (> 148.9 °C) (based on ingredients)
Melting point/Freezing point	Not available.
Solubility (water)	Practically insoluble.
Specific gravity	0.9 @ 60°F (15.6°C)
Relative density	0.9 g/cm ³ @ 60°F (15.6°C)
Flash point	> 141.8 °F (> 61.0 °C) Pensky-Martens Closed Cup
Flammability limits in air, upper, % by volume	Not Available.
Flammability limits in air, lower, % by volume	Not Available.
Auto-ignition temperature	Not available.
Evaporation rate	Not available.
Partition coefficient (n-octanol/water)	Not available.
Other data	
Explosive properties	Not explosive.
Flammability (solid, gas)	Not applicable.
Kinematic viscosity	< 10 cSt @ 104°F (40°C) (estimated)
Oxidizing properties	None known.

10. Chemical Stability & Reactivity Information

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Contact with incompatible materials. Do not use in areas without adequate ventilation.
Incompatible materials	Strong oxidizing agents. Strong acids. Halogenated materials. Isocyanates.
Hazardous decomposition products	None known, refer to hazardous combustion products in Section 5.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use. Hazardous polymerization does not occur.

11. Toxicological Information

Toxicological data

Components	Species	Test Results
1,2,4-Trimethylbenzene (CAS 95-63-6)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 3160 mg/kg
<i>Inhalation</i>		
LC50	Rat	18 mg/l, 4 hours (vapor)
<i>Oral</i>		
LD50	Rat	5000 mg/kg
1,3,5-Trimethylbenzene (CAS 108-67-8)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 3160 mg/kg
<i>Inhalation</i>		
LC50	Rat	24 mg/l, 4 hours (Vapor)
<i>Oral</i>		
LD50	Rat	23000 mg/kg
2-Ethylhexyl Alcohol (CAS 104-76-7)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	1985 mg/kg
<i>Inhalation</i>		
LC50	Rat	5.5 mg/l, 4 hours
<i>Oral</i>		
LD50	Rat	2052 mg/kg
Naphthalene (CAS 91-20-3)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 20000 mg/kg
<i>Inhalation</i>		
No data available		
<i>Oral</i>		
LD50	Mouse	533 mg/kg
	Rat	490 mg/kg
Solvent naphtha (petroleum), heavy aromatic (CAS 64742-94-5)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 3160 mg/kg
<i>Inhalation</i>		
LC50	Rat	> 17.1 mg/l, 4 hours (Mist)
<i>Oral</i>		
LD50	Rat	> 6000 mg/kg

Components	Species	Test Results
Solvent naphtha (petroleum), light aromatic (CAS 64742-95-6)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 3160 mg/kg
<i>Inhalation</i>		
LC50	Rat	> 17.7 mg/l, 4 hours (vapor)
<i>Oral</i>		
LD50	Rat	8400 mg/kg
Acute effects	May cause mild to moderate eye irritation. May cause mild to moderate skin irritation. May cause irritation to the respiratory tract. May cause central nervous system effects. May be an aspiration hazard. See data above for individual ingredient acute toxicity data.	
Sensitization	Not expected to be a skin or respiratory sensitizer.	
Chronic effects	Prolonged or repeated contact may cause drying, cracking and defatting of the skin. Repeated overexposure to naphthalene may cause destruction of red blood cells with anemia, fever, jaundice and kidney and liver damage.	
Carcinogenicity	Suspected of causing cancer. Contains: Naphthalene. Naphthalene is classified as carcinogenic by IARC (Group 2B) and NTP (Group 2 - Reasonably anticipated). See below for ingredients present on regulatory lists.	
ACGIH Carcinogens		
Naphthalene (CAS 91-20-3)	A3 Confirmed animal carcinogen with unknown relevance to humans.	
IARC Monographs. Overall Evaluation of Carcinogenicity		
Naphthalene (CAS 91-20-3)	2B Possibly carcinogenic to humans.	
Skin corrosion/irritation	May cause mild to moderate skin irritation.	
Serious eye damage/irritation	May cause mild to moderate eye irritation.	
Mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Reproductive effects	This product is not expected to cause reproductive effects.	
Teratogenicity	This product is not expected to be a teratogen.	
Most important symptoms/effects, acute and delayed	Aspiration hazard. Aspiration into the lungs during swallowing or subsequent vomiting may cause chemical pneumonitis, which can be fatal. Harmful if inhaled. Symptoms may include upper respiratory irritation, coughing, and breathing difficulties. Symptoms may include pain, headache, nausea, vomiting, dizziness, drowsiness and other central nervous system effects. Could also cause convulsions, coma and respiratory arrest. Suspected of causing cancer. Symptoms may include persistent coughing, shortness of breath, coughing up blood and wheezing. Causes damage to the blood system if swallowed. Contains: Naphthalene Repeated overexposure to naphthalene may cause destruction of red blood cells with anemia, fever, jaundice and kidney and liver damage. May cause mild to moderate skin irritation. May cause redness and pain. Direct eye contact may cause slight or mild, transient irritation. Symptoms may include stinging and tearing. Ingestion of large amounts may cause nausea, vomiting, diarrhea, as well as depression of the central nervous system.	
Further information	Symptoms may be delayed.	

12. Ecological Information

Ecotoxicological data

Components		Species	Test Results
1,2,4-Trimethylbenzene (CAS 95-63-6)			
Aquatic			
<i>Acute</i>			
Algae	EC50	Green algae (<i>Selenastrum capricornutum</i>)	2.356 mg/l, 96 hours
Crustacea	EC50	Water flea (<i>Daphnia magna</i>)	3.6 mg/l, 48 hours
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>)	7.72 mg/l, 96 hours
1,3,5-Trimethylbenzene (CAS 108-67-8)			
Aquatic			
<i>Acute</i>			
Algae	EC50	Green algae (<i>Desmodesmus subspicatus</i>)	3.191 mg/l, 96 hours
Crustacea	EC50	Water flea (<i>Daphnia magna</i>)	6 mg/l, 48 hours
Fish	LC50	Goldfish (<i>Carassius auratus</i>)	12.52 mg/l, 96 hours
<i>Chronic</i>			
Crustacea	NOEC	Water flea (<i>Daphnia magna</i>)	0.4 mg/l, 21 days
2-Ethylhexyl Alcohol (CAS 104-76-7)			
Aquatic			
<i>Acute</i>			
Algae	EC50	Green algae (<i>Desmodesmus subspicatus</i>)	11.5 mg/l, 72 hours
Crustacea	EC50	Water flea (<i>Daphnia magna</i>)	39 mg/l, 48 hours
Fish	EC50	Ide, silver or golden orfe (<i>Leuciscus idus</i>)	17.1 mg/l, 96 hours
Naphthalene (CAS 91-20-3)			
Aquatic			
<i>Acute</i>			
Algae	EC50	Green algae (<i>Selenastrum capricornutum</i>)	0.4 mg/l, 72 hours
Crustacea	EC50	Water flea (<i>Daphnia magna</i>)	3.4 mg/l, 48 hours
Fish	LC50	Pink salmon (<i>Oncorhynchus gorbuscha</i>)	0.96 mg/l, 96 hours
<i>Chronic</i>			
Crustacea	NOEC	Water flea (<i>Daphnia magna</i>)	0.6 - 0.22 mg/l, 21 days
Fish	NOEC	Pink salmon (<i>Oncorhynchus gorbuscha</i>)	0.12 mg/l, 40 days
Solvent naphtha (petroleum), heavy aromatic (CAS 64742-94-5)			
<i>Acute</i>			
	LC50	Rainbow trout (<i>Oncorhynchus mykiss</i>)	3.6 mg/l, 96 hours
Aquatic			
<i>Acute</i>			
Algae	EC50	Green algae (<i>Selenastrum capricornutum</i>)	7.2 mg/l, 72 hours
Crustacea	EC50	Water flea (<i>Daphnia magna</i>)	1.1 mg/l, 48 hours
<i>Chronic</i>			
Algae	NOEC	Green algae (<i>Selenastrum capricornutum</i>)	0.22 mg/l, 72 hours
Solvent naphtha (petroleum), light aromatic (CAS 64742-95-6)			
Aquatic			
<i>Acute</i>			
Crustacea	EC50	Water flea (<i>Daphnia magna</i>)	6.16 mg/l, 48 hours

Components	Species	Test Results
Fish	LC50 Rainbow trout,donaldson trout (Oncorhynchus mykiss)	9.22 mg/l, 96 hours
Ecotoxicity	Toxic to aquatic life with long lasting effects. No data is available on the product itself. See above for individual ingredient ecotoxicity data.	
Environmental effects	Toxic to aquatic organisms. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.	
Aquatic toxicity	No data is available on the product itself. The product should not be allowed to enter drains, water courses or the soil.	
Persistence and degradability	Contains the following chemicals which are not considered to be readily biodegradable: Solvent naphtha (petroleum), heavy aromatic. Naphthalene. 1,3,5-Trimethylbenzene. Contains the following chemicals which are considered to be inherently biodegradable: 1,2,4-Trimethylbenzene. Solvent naphtha (petroleum), light aromatic. Contains the following chemicals which are considered to be readily biodegradable: 2-Ethylhexanol.	
Bioaccumulation / accumulation	The product itself has not been tested. See the following data for ingredient information.	
Bioaccumulative potential		
Bioconcentration factor		
1,2,4-Trimethylbenzene	31 - 275	
1,3,5-Trimethylbenzene	23 - 328	
Naphthalene	427	
Solvent naphtha (petroleum), light aromatic	Species: Fathead minnow (Pimephales promelas) 10 - 2500 (calculated)	
Partition coefficient		
1,2,4-Trimethylbenzene	3.78	
1,3,5-Trimethylbenzene	3.6 - 3.93	
Naphthalene	3.7	
Solvent naphtha (petroleum), heavy aromatic	3 - 6.5	
Solvent naphtha (petroleum), light aromatic	2.1 - 6, (calculated)	
Mobility in environmental media	No data available for this product.	

13. Disposal Considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Dispose in accordance with all applicable regulations.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport Information

TDG

Not regulated unless shipping internationally by sea or air. Refer to IMDG or IATA information for international sea or air shipments, as appropriate.

IATA

UN number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s. (Solvent naphtha (petroleum), heavy aromatic; Naphthalene)
Transport hazard class(es)	
Class	9
Subsidiary risk	None.
Packing group	III
Environmental hazards	Yes
ERG Code	9L

Special precautions for user Read safety instructions, MSDS and emergency procedures before handling.
Refer to the appropriate Packing Instruction, prior to shipping this material. Review all State and Operator Variations, prior to shipping this material.

Other information

Passenger and cargo aircraft Allowed.

Cargo aircraft only Allowed.

IMDG

UN number UN3082

UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Solvent naphtha (petroleum), heavy aromatic; Naphthalene)

Transport hazard class(es)

Class 9

Subsidiary risk None.

Packing group III

Environmental hazards

Marine pollutant Yes

EmS F-A, S-F

Special precautions for user Read safety instructions, MSDS and emergency procedures before handling.

IATA; IMDG



Marine pollutant



General information

This product meets the criteria for an environmentally hazardous mixture, according to the IMDG Code. See ECOLOGICAL INFORMATION, Section 12.

15. Regulatory Information

Canadian regulations

This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

WHMIS status

Controlled

WHMIS classification

B3 - Combustible Liquids
D2A - Other Toxic Effects-VERY TOXIC
D2B - Other Toxic Effects-TOXIC

WHMIS labeling



International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other Information

HMIS® ratings

Health: 2*
Flammability: 2
Physical hazard: 0

NFPA ratings

Health: 2
Flammability: 2
Instability: 0

Disclaimer

Prepared by: ICC The Compliance Center Inc. 1-888-442-9628
<http://www.thecompliancecenter.com>

Disclaimer

The information in this SDS was obtained from sources, which we believe are reliable. However, since the conditions of handling and use are beyond our control, we assume no liability for damages incurred by use of this material. This SDS was prepared, and is to be used, for this product only. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that may exist. If the product is used as a component in another product, this information may not be applicable. Users of this product should satisfy themselves that the conditions and methods of use assure the product is used safely. No representations or warranties, either expressed or implied, of any nature are made hereunder with respect to the information contained herein. It is the responsibility of the user to comply with any and all federal, state, or local laws and regulations that may exist. Nothing contained herein is to be construed as a recommendation for use in violation of any applicable laws or regulations.

Bibliography

Canadian Centre for Occupational Health and Safety, CCIInfoWeb Databases, 2015 (Chempendium, RTECs, HSDB, INCHEM)
International Agency for Research on Cancer Monographs (2015)
Material Safety Data Sheet from manufacturer.
OECD - The Global Portal to Information on Chemical Substances - eChemPortal, 2015.

**Legend to abbreviations and
acronyms used in the SDS**

ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstract Services
CEPA: Canadian Environmental Protection Act
CPR: Controlled Products Regulation
CSA: Canadian Standards Association
DSL: Domestic Substance List
EC50: Effective Concentration 50%.
ERG: Emergency Response Guidebook
HMIS: Hazardous Materials Identification System
HPA: Hazardous Products Act
HSDB® - Hazardous Substances Data Bank
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association
IBC: Intermediate Bulk Container
IMDG: International Maritime Dangerous Goods
LC: Lethal Concentration
LD: Lethal Dose
MSDS: Material Safety Data Sheet
NDSL: Canada, Non-Domestic Substances List.
NFPA: National Fire Protection Association
NIOSH: National Institute of Occupational Safety and Health
NOEC: No observable effect concentration
NTP: National Toxicology Program
OECD: Organisation for Economic Cooperation and Development
OSHA: Occupational Safety and Health Administration
PEL: Permissible exposure limit
RTECS: Registry of Toxic Effects of Chemical Substances
SCBA: self-contained breathing apparatus
STEL: Short Term Exposure Limit
TDG: Canadian Transportation of Dangerous Goods Act & Regulations
TLV: Threshold Limit Values
TWA: Time Weighted Average
UN: United Nations
WHMIS: Workplace Hazardous Materials Identification System