SAFETY DATA SHEET

SECTION 1. IDENTIFICATION

Product identifier used on the label

: **5-MINUTE SYNTHETIC MOTOR FLUSH**

Product Code(s) : MFD1C

Recommended use of the chemical and restrictions on use

: Engine cleaner for removing gum, varnish, and sludge deposits. Frees sticky valves and lifters. Improves oil circulation. Safe for use with all engines, including turbo-charged gas and diesel engines.
No restrictions on use known.

Chemical family : Mixture of: Petroleum oil; Solvent; Lubricity improver; Anti-wear additives; Surfactants

Name, address, and telephone number of the supplier:

Radiator Specialty Co., of Canada

1711 Aimco Blvd.
Mississauga, ON, Canada
L4W 1H7

Supplier's Telephone # : (905) 625-9117 (Mon. - Fri., 8 am - 4 pm)

24 Hr. Emergency Tel # : (613) 996-6666 (CANUTEC)

Name, address, and telephone number of the manufacturer:

Refer to supplier

SECTION 2. HAZARDS IDENTIFICATION

Classification of the chemical

Clear amber liquid. Petroleum odour.

Most important hazards:
Aspiration hazard. Aspiration into the lungs during swallowing or subsequent vomiting may cause chemical pneumonitis, which can be fatal. Causes serious eye damage. Occupational exposure to the substance or mixture may cause adverse effects. For further information, please refer to section 11 of the SDS.
Harmful to aquatic life with long lasting effects. Avoid release to the environment. See Section 12 for more environmental information.

This material is classified as hazardous under Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015).
Hazardous classification:
Eye damage/irritation - Category 1
Aspiration toxicity - Category 1

Label elements

This product is packaged and sold as a consumer product. The below WHMIS 2015 labeling information is being provided for informational purposes.

Hazard pictogram(s)

Signal Word

DANGER!

Hazard statement(s)

May be fatal if swallowed and enters airways.
Causes serious eye damage.

Precautionary statement(s)

Wear eye/face protection.

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

Store locked up.

Dispose of contents/container in accordance with local regulation.

SAFETY DATA SHEET

Other hazards

Other hazards which do not result in classification:
Toxic fumes may be released during a fire. Mild respiratory irritant. May cause gastrointestinal irritation. In extremely high concentrations, may cause symptoms of central nervous system depression.

Environmental precautions:
Harmful to aquatic life with long lasting effects. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Avoid release to the environment. See ECOLOGICAL INFORMATION, Section 12.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	Common name and synonyms	CAS #	Concentration (% by weight)
Hydrotreated light naphthenic distillate	Petroleum hydrocarbon	64742-53-6	**25.0**
Distillates (petroleum), hydrotreated heavy naphthenic	Mineral oil	64742-52-5	**25.0**
Diethylene glycol monobutyl ether	2-(2-Butoxyethoxy)ethanol DEGBE	112-34-5	**10.0**
Zinc bis(O,O-ethylhexyl and isobutyl dithiophosphate)	Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu) esters, zinc salts Zinc dialkyl dithiophosphate	68442-22-8	**4.5**
Dodecylbenzene isopropylamine sulfonate	Dodecylbenzenesulfonic acid, compound with 2-propanamine	26264-05-1	**1.44**
Zinc bis(O,O-diisobutyl dithiophosphate)	phosphorodithioic acid, mixed O,O-bis(iso-Bu and pentyl) esters, zinc salts Zinc dialkyl dithiophosphate	68457-79-4	**1.275**

SECTION 4. FIRST-AID MEASURES

Description of first aid measures

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

Inhalation : If inhaled, move to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen by qualified medical personnel only. If irritation or symptoms develop, seek medical attention.

Skin contact : In case of contact with skin, wash with mild soap and plenty of water. Remove contaminated clothing and shoes. If irritation or symptoms develop, seek medical attention.

Eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Flush eyes with water for at least 15 minutes. Immediately call a POISON CENTER or doctor/physician.

Most important symptoms and effects, both acute and delayed

: Aspiration hazard. Aspiration into the lungs during swallowing or subsequent vomiting may cause chemical pneumonitis, which can be fatal.
Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause irreversible eye damage.
Direct skin contact may cause slight or mild, transient irritation. Direct skin contact may cause temporary redness.
Mild respiratory irritant. If product is heated or mists are formed, inhalation may cause irritation to the nose, throat and respiratory tract. May cause coughing and breathing difficulties.
Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
In extremely high concentrations, may also cause nausea, vomiting, dizziness, drowsiness and other symptoms of central nervous system depression.

Indication of any immediate medical attention and special treatment needed

: Immediate medical attention is required. Causes serious eye damage. Aspiration hazard if swallowed - can enter lungs and cause damage.
Provide general supportive measures and treat symptomatically.

SAFETY DATA SHEET

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media

: Use media suitable to the surrounding fire such as water fog or fine spray, alcohol foams, carbon dioxide and dry chemical.

Unsuitable extinguishing media

: Do not use water jet, as this may spread burning material.

Special hazards arising from the substance or mixture / Conditions of flammability

: Not flammable under normal conditions of use. However, may burn if exposed to extreme heat and flame. Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure.

Hazardous combustion products

: Carbon oxides; Nitrogen oxides (NOx); Sulfur oxides; Phosphorus oxides; Aldehydes; Hydrocarbons; Polycyclic aromatic hydrocarbons; Hydrogen sulfide; Phosgene; Other unidentified organic compounds.

Special protective equipment and precautions for firefighters

Protective equipment for fire-fighters

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

Special fire-fighting procedures

: Move containers from fire area if safe to do so. Water spray may be useful in cooling equipment exposed to heat and flame. Do not allow run-off from fire fighting to enter drains or water courses. Dike for water control.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

: All persons dealing with the clean-up should wear the appropriate chemically protective equipment. Keep all other personnel upwind and away from the spill/release. Restrict access to area until completion of clean-up. Refer to protective measures listed in sections 7 and 8.

Environmental precautions : Ensure spilled product does not enter drains, sewers, waterways, or confined spaces. Avoid release to the environment.

Methods and material for containment and cleaning up

: Ventilate the area. Prevent further leakage or spillage if safe to do so. Eliminate all ignition sources. Contain and absorb spilled liquid with non-combustible, inert absorbent material (e.g. sand). Pick up and transfer to properly labeled containers. Refer to Section 13 for disposal of contaminated material. Contact the proper local authorities.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling

: Use with adequate ventilation. Avoid breathing vapours, fumes, or mists. Wear protective equipment during handling. Wear eye/face protection. Avoid contact with skin, eyes and clothing. Keep away from extreme heat and direct flame. Keep away from incompatibles. Keep container tightly closed when not in use. Wash thoroughly after handling. Empty containers retain residue (liquid and/or vapour) and can be dangerous.

Conditions for safe storage : Store in a cool, dry, well-ventilated area. Store away from incompatibles and out of direct sunlight. Store locked up. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks.

Incompatible materials : Oxidizing agents; Reducing agents; Strong acids; Strong bases; Reactive metals

SAFETY DATA SHEET

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits:

Chemical Name	ACGIH TLV		OSHA PEL	
	TWA	STEL	PEL	STEL
Hydrotreated light naphthenic distillate	5 mg/m³ (As 'Oil mist, mineral') (inhalable)	N/Av	5 mg/m³ (As 'Oil mist, mineral')	N/Av
Distillates (petroleum), hydrotreated heavy naphthenic	5 mg/m³ (As 'Oil mist, mineral') (inhalable)	N/Av	5 mg/m³ (As 'Oil mist, mineral')	N/Av
Diethylene glycol monobutyl ether	10 ppm (inhalable) (vapor)	N/Av	N/Av	N/Av
Zinc bis(O,O-ethylhexyl and isobutyl dithiophosphate)	N/Av	N/Av	N/Av	N/Av
Dodecylbenzene isopropylamine sulfonate	N/Av	N/Av	N/Av	N/Av
Zinc bis(O,O-diisobutyl dithiophosphate)	N/Av	N/Av	N/Av	N/Av

Exposure controls

Ventilation and engineering measures
: Use with adequate local or mechanical ventilation to meet TLV requirements.

Respiratory protection : If airbourne concentrations are above the permissible exposure limit or are not known, use NIOSH-approved respirators. Respirators should be selected based on the form and concentration of contaminants in air, and in accordance with CSA Z94.4-02.

Skin protection : Gloves impervious to the material are recommended. The suitability for a specific workplace should be discussed with the producers of the protective gloves. Wear sufficient clothing to prevent skin contact.

Eye / face protection : Wear eye/face protection. Wear as appropriate: Safety glasses with side shields; Tightly fitting safety goggles. A full face shield may also be necessary.

Other protective equipment : An eyewash station and safety shower should be made available in the immediate working area. Other equipment may be required depending on workplace standards.

General hygiene considerations
: Avoid breathing vapours, fumes, or mists. Avoid contact with skin, eyes and clothing. Upon completion of work, wash hands before eating, drinking, smoking or use of toilet facilities. Remove soiled clothing and wash it thoroughly before reuse. Handle in accordance with good industrial hygiene and safety practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Clear amber liquid.
Odour : Petroleum odour.
Odour threshold : N/Ap
pH : N/Av
Melting/Freezing point : - 68.1°C (- 90.6°F) (estimation)
Initial boiling point and boiling range
: 230.4°C (446.72°F) (estimation)
Flash point : 93.9°C (201°F)
Flashpoint (Method) : Tag closed cup
Evaporation rate (BuAe = 1) : N/Av
Flammability (solid, gas) : Not applicable.
Lower flammable limit (% by vol.)
: N/Av
Upper flammable limit (% by vol.)
: N/Av

SAFETY DATA SHEET

Oxidizing properties : None known.
Explosive properties : Not explosive
Vapour pressure : 0.002 kPa (0.015 mmHg) (estimation)
Vapour density : N/Av
Relative density / Specific gravity
: 0.898
Solubility in water : Insoluble.
Other solubility(ies) : N/Av
Partition coefficient: n-octanol/water or Coefficient of water/oil distribution
: N/Av
Auto-ignition temperature : 227.8°C (442°F) (estimation)
Decomposition temperature : N/Av
Viscosity : 7.9 cSt @ 40°C (104°F)
Volatiles (% by weight) : 10%
Volatile organic Compounds (VOC's)
: N/Av
Absolute pressure of container
: N/Ap
Flame projection length : N/Ap
Other physical/chemical comments
: No additional information.

SECTION 10. STABILITY AND REACTIVITY

Reactivity : Not normally reactive.
Chemical stability : Stable under normal conditions.
Possibility of hazardous reactions
: Hazardous polymerization does not occur.
Conditions to avoid : Ensure adequate ventilation, especially in confined areas. Avoid contact with incompatible materials. Avoid heat and open flame.
Incompatible materials : Oxidizing agents; Reducing agents; Strong acids; Strong bases; Reactive metals

Hazardous decomposition products
: None known, refer to hazardous combustion products in Section 5.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:

Routes of entry inhalation : YES
Routes of entry skin & eye : YES
Routes of entry Ingestion : YES
Routes of exposure skin absorption
: NO

Potential Health Effects:

Signs and symptoms of short-term (acute) exposure
Sign and symptoms Inhalation
: Mild respiratory irritant. If product is heated or mists are formed, inhalation may cause irritation to the nose, throat and respiratory tract. May cause coughing and breathing difficulties. In extremely high concentrations, may also cause nausea, vomiting, dizziness, drowsiness and other symptoms of central nervous system depression.
Sign and symptoms ingestion
: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

SAFETY DATA SHEET

Sign and symptoms skin : Direct skin contact may cause slight or mild, transient irritation. Direct skin contact may cause temporary redness.

Sign and symptoms eyes : Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling and blurred vision. May cause irreversible eye damage.

Potential Chronic Health Effects

: Prolonged or repeated skin contact may cause drying and irritation.

Mutagenicity : No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity : Not expected to have carcinogenic effects.
No components are listed as carcinogens by ACGIH, IARC, OSHA or NTP.

Reproductive effects & Teratogenicity

: This product is not expected to cause reproductive or developmental effects.

Sensitization to material : No data available to indicate product or components may be skin sensitizers.
No data available to indicate product or components may be respiratory sensitizers.

Specific target organ effects : According to the classification criteria of Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015), this product is not expected to cause specific target organ toxicity (STOT) through single or repeated exposures.

Medical conditions aggravated by overexposure

: Pre-existing skin, eye and respiratory disorders.

Synergistic materials : No information available.

Toxicological data : Not classified for acute toxicity based on available data. The calculated ATE values for this mixture are:
ATE oral = 30,657 mg/kg
ATE dermal = 54,546 mg/kg
ATE inhalation (dust/mist) = 8.72 mg/L/4H

See below for individual ingredient acute toxicity data.

Chemical name	LC_{50} (4hr) inh, rat	LD_{50} (Oral, rat)	LD_{50} (Rabbit, dermal)
Hydrotreated light naphthenic distillate	≥ 2.18 mg/L (mist)	> 5000 mg/kg	> 2000 mg/kg
Distillates (petroleum), hydrotreated heavy naphthenic	> 5 mg/L (mist)	> 5000 mg/kg	> 2000 mg/kg
Diethylene glycol monobutyl ether	No data available. Rats exposed to an atmosphere saturated with vapors exhibited no adverse clinical signs.	6560 mg/kg	2764 mg/kg
Zinc bis(O,O-ethylhexyl and isobutyl dithiophosphate)	No data available. At ambient temperatures, not considered to be an inhalation hazard.	> 2000, < 5000 mg/kg	> 2002 mg/kg (rat) (No mortality)
Dodecylbenzene isopropylamine sulfonate	No data available. Not expected to be harmful.	1300 mg/kg	No data available. Not expected to be harmful.
Zinc bis(O,O-diisobutyl dithiophosphate)	No data available. Not expected to be harmful.	3600 mg/kg	> 2000 mg/kg (No mortality)

Other important toxicological hazards

: None known or reported by the manufacturer.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity : Harmful to aquatic life with long lasting effects. No data is available on the product itself. The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters. This product contains the following substance which may also be hazardous for the environment: Hydrotreated light naphtha (petroleum); Zinc bis(O,O-ethylhexyl and isobutyl dithiophosphate); Zinc bis(O,O-diisobutyl dithiophosphate).

See the following tables for individual ingredient ecotoxicity data.

SAFETY DATA SHEET

Ecotoxicity data:

Ingredients	CAS No	Toxicity to Fish		
		LC50 / 96h	NOEC / 21 day	M Factor
Hydrotreated light naphthenic distillate	64742-53-6	> 100 mg/L (Fathead minnow)	N/Av	None.
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	> 5000 mg/L (Rainbow trout)	N/Av	None.
Diethylene glycol monobutyl ether	112-34-5	1300 mg/L (Bluegill sunfish)	N/Av	None.
Zinc bis(O,O-ethylhexyl and isobutyl dithiophosphate)	68442-22-8	4.5 mg/L (Rainbow trout) (Read-across)	N/Av	None.
Dodecylbenzene isopropylamine sulfonate	26264-05-1	22 mg/L (Fathead minnow)	N/Av	None.
Zinc bis(O,O-diisobutyl dithiophosphate)	68457-79-4	46 mg/L (sheepshead minnow)	N/Av	None.

Ingredients	CAS No	Toxicity to Daphnia		
		EC50 / 48h	NOEC / 21 day	M Factor
Hydrotreated light naphthenic distillate	64742-53-6	> 10 000 mg/L (Daphnia magna)	10 mg/L (NOEL)	None.
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	> 1000 mg/L (Daphnia magna)	N/Av	None.
Diethylene glycol monobutyl ether	112-34-5	> 100 mg/L (Daphnia magna)	N/Av	None.
Zinc bis(O,O-ethylhexyl and isobutyl dithiophosphate)	68442-22-8	23 mg/L (Daphnia magna) (Read-across)	0.4 - 0.8 mg/L	None.
Dodecylbenzene isopropylamine sulfonate	26264-05-1	2.5 mg/L (Daphnia magna)	N/Av	None.
Zinc bis(O,O-diisobutyl dithiophosphate)	68457-79-4	23 mg/L (Daphnia magna)	0.4 - 0.8 mg/L	None.

Ingredients	CAS No	Toxicity to Algae		
		EC50 / 96h or 72h	NOEC / 96h or 72h	M Factor
Hydrotreated light naphthenic distillate	64742-53-6	N/Av	> 100 mg/L/72hr (NOEL)	None.
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	> 1000 mg/L/96hr (Green algae)	N/Av	None.
Diethylene glycol monobutyl ether	112-34-5	> 100 mg/L/96hr (Green algae)	N/Av	None.
Zinc bis(O,O-ethylhexyl and isobutyl dithiophosphate)	68442-22-8	24 mg/L/72hr (Green algae) (Read-across)	N/Av	None.
Dodecylbenzene isopropylamine sulfonate	26264-05-1	70 mg/L/96hr	N/Av	None.
Zinc bis(O,O-diisobutyl dithiophosphate)	68457-79-4	24 mg/L/72hr (Green algae)	N/Av	None.

Persistence and degradability

: No data is available on the product itself.
Contains the following chemicals which are not readily biodegradable: Hydrotreated light naphthenic distillate; Zinc bis(O,O-ethylhexyl and isobutyl dithiophosphate); Zinc bis(O,O-diisobutyl dithiophosphate).
Contains the following chemicals which are considered to be inherently biodegradable: Distillates (petroleum), hydrotreated heavy naphthenic.
The following ingredients are considered to be readily biodegradable: Diethylene glycol monobutyl ether; Dodecylbenzene isopropylamine sulfonate.

SAFETY DATA SHEET

Bioaccumulation potential : No data is available on the product itself. See the following data for ingredient information.

Components	Partition coefficient n-octanol/water (log Kow)	Bioconcentration factor (BCF)
Hydrotreated light naphthenic distillate (CAS 64742-53-6)	3.9 - 6 (calculated)	N/Av
Distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)	> 20	N/Av
Diethylene glycol monobutyl ether (CAS 112-34-5)	1.0	3.0
Zinc bis(O,O-ethylhexyl and isobutyl dithiophosphate) (CAS 68442-22-8)	1.67	N/Av
Dodecylbenzene isopropylamine sulfonate (CAS 26264-05-1)	6.18	N/Av
Zinc bis(O,O-diisobutyl dithiophosphate) (CAS 68457-79-4)	0.69	N/Av

Mobility in soil : No data is available on the product itself.

Other Adverse Environmental effects

: No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

SECTION 13. DISPOSAL CONSIDERATIONS

Handling for Disposal : Handle waste according to recommendations in Section 7. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

Methods of Disposal : Dispose in accordance with all applicable federal, state, provincial and local regulations.

SECTION 14. TRANSPORTATION INFORMATION

Regulatory Information	UN Number	UN proper shipping name	Transport hazard class(es)	Packing Group	Label
TDG	None.	Not regulated.	Not regulated	None	
TDG Additional information	None.				
ICAO/IATA	None.	Not regulated.	Not regulated	None	
ICAO/IATA Additional information	None.				
IMDG	None.	Not regulated.	Not regulated	None	
IMDG Additional information	None.				

Special precautions for user : Appropriate advice on safety must accompany the package. Avoid release to the environment.

SAFETY DATA SHEET

Environmental hazards : This product does not meet the criteria for an environmentally hazardous mixture, according to the IMDG Code. See Section 12 for more environmental information.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

: Not applicable.

SECTION 15 - REGULATORY INFORMATION

Canadian Information:

Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on the Domestic Substances List (DSL).

Canadian National Pollutant Release Inventory (NPRI): This product contains the following substances listed on the NPRI:
Diethylene glycol monobutyl ether (Part 5: Other groups and mixtures)

WHMIS information: Refer to Section 2 for a WHMIS Classification for this product.

US Federal Information:

TSCA: All listed ingredients appear on the Toxic Substances Control Act (TSCA) inventory.

International Information:

Components listed below are present on the following International Inventory list:

Ingredients	CAS #	European EINECs	Australia AICS	Philippines PICCS	Japan ENCS	Korea KECI/KECL	China IECSC	New Zealand IOC
Hydrotreated light naphthenic distillate	64742-53-6	265-156-6	Present	Present	(9)-1692	KE-12552	Present	May be used as a single component chemical under an appropriate group standard.
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	265-155-0	Present	Present	(9)-1689	KE-12543	Present	May be used as a single component chemical under an appropriate group standard.
Diethylene glycol monobutyl ether	112-34-5	203-961-6	Present	Present	(7)-97; (2)-422	KE-10466	Present	HSR001075
Zinc bis(O,O-ethylhexyl and isobutyl dithiophosphate)	68442-22-8	270-478-5	Not listed	Present	Not listed	Not listed	Present	May be used as a component in a product covered by a group standard, but is not approved for use as a chemical in its own right.
Dodecylbenzene isopropylamine sulfonate	26264-05-1	247-556-2	Present	Present	Not listed	KE-12952	Present	HSR003402
Zinc bis(O,O-diisobutyl dithiophosphate)	68457-79-4	270-608-0	Present	Present	(2)-2945	KE-28665	Present	May be used as a component in a product covered by a group standard, but is not approved for use as a chemical in its own right.

SAFETY DATA SHEET

SECTION 16. OTHER INFORMATION

Legend :

ACGIH: American Conference of Governmental Industrial Hygienists
AICS: Australian Inventory of Chemical Substances
ATE: Acute Toxicity Estimate
CAS: Chemical Abstract Services
ENCS: Existing and New Chemical Substances
HSDB: Hazardous Substances Data Bank
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association
ICAO: International Civil Aviation Organisation
IMDG: International Maritime Dangerous Goods
Inh: Inhalation
IOC: Inventory of Chemicals
IUCLID: International Uniform Chemical Information Database
KECI: Korean Existing Chemicals Inventory
KECL: Korean Existing Chemicals List
LC: Lethal Concentration
LD: Lethal Dose
MSHA: Mine Safety and Health Administration
N/Ap: Not Applicable
N/Av: Not Available
NFPA: National Fire Protection Association
NIOSH: National Institute of Occupational Safety and Health
NOEC: No observable effect concentration
OECD: Organisation for Economic Co-operation and Development
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration
PEL: Permissible exposure limit
PICCS: Philippine Inventory of Chemicals and Chemical Substances
RTECS: Registry of Toxic Effects of Chemical Substances
SDS: Safety Data Sheet
STEL: Short Term Exposure Limit
TDG: Canadian Transportation of Dangerous Goods Act & Regulations
TLV: Threshold Limit Values
TWA: Time Weighted Average
TSCA: Toxic Substance Control Act
WHMIS: Workplace Hazardous Materials Identification System

References :

1. ACGIH, Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices for 2016.
2. International Agency for Research on Cancer Monographs, searched 2017.
3. Canadian Centre for Occupational Health and Safety, CCInfoWeb databases, 2017 (Chempendium, HSDB and RTECs).
4. Material Safety Data Sheets from manufacturer.
5. OECD - The Global Portal to Information on Chemical Substances - eChemPortal, 2017.

Preparation Date (mm/dd/yyyy)

: 01/27/2017

Other special considerations for handling

: Provide adequate information, instruction and training for operators.

SAFETY DATA SHEET

Prepared for: Radiator Specialty Co. of Canada 1711 Aimco Blvd. Mississauga, ON, Canada, L4W 1H7 Telephone: 905-625-9117 (Mon. - Fri., 8 AM - 4 PM) Please direct all enquiries to Radiator Specialty.	
Prepared by: ICC The Compliance Center Inc. Telephone: (888) 442-9628 (U.S.): (888) 977-4834 (Canada) http://www.thecompliancecenter.com	

DISCLAIMER

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