

**SAFETY DATA SHEET****SECTION 1. IDENTIFICATION****Product identifier used on the label**: **BRAKE FLUID DOT 3****Product Code(s)** : M4312C, M4316C, M4332C, M4334C, M4339C**Recommended use of the chemical and restrictions on use**: Brake fluid designed for vehicles with disc or drum brakes, in both domestic and foreign vehicles.  
No restrictions on use known.**Chemical family** : Mixture.**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 to yellow liquid. Ether like odour.

*Most important hazards:*

Suspected of damaging the unborn child. May cause damage to organs. 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. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. See Section 12 for more environmental information.

This material is classified as hazardous under Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015).

Hazardous classification:

Reproductive toxicity - Category 2

Specific target organ toxicity, single exposure - Category 2

**Label elements***Hazard pictogram(s)**Signal Word*

WARNING!

*Hazard statement(s)*Suspected of damaging the unborn child.  
May cause damage to organs.*Precautionary statement(s)*

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe the mist or vapor. Wash exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/clothing and eye/face protection.

If exposed or concerned: 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. May release peroxides on exposure to light and air, or on contact with incompatibles. Rate of peroxide formation is not known. May cause slight eye and skin irritation. Mild respiratory irritant. May cause gastrointestinal irritation. Ingestion of larger amounts may cause defects to the central nervous system (e.g. dizziness, headache). Prolonged or repeated ingestion may cause bladder or kidney stones. Prolonged overexposure may cause slight liver effects, such as increased organ weights.

*Environmental precautions:*

Harmful to aquatic life with long lasting effects. Avoid release to the environment. See Section 12 for more environmental information.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

<u>Chemical name</u>	<u>Common name and synonyms</u>	<u>CAS #</u>	<u>Concentration (% by weight)</u>
Triethylene glycol monobutyl ether	2-[2-(2-butoxyethoxy)ethoxy]ethan ol TEGBE	143-22-6	> 1.0 - < 30.0
Pentaethylene glycol	3,6,9,12-Tetraoxatetradecane-1,1 4-diol	4792-15-8	> 1.0 - < 30.0
Polyethylene glycol monobutyl ether	Poly(oxy-1,2-ethanediyl), alpha-butyl-omega-hydroxy-	9004-77-7	> 1.0 - < 20.0
Diethylene glycol monobutyl ether	2-(2-Butoxyethoxy)ethanol DEGBE	112-34-5	> 1.0 - < 10.0
Diethylene glycol	2,2'-Oxydiethanol Bis(2-hydroxyethyl) ether DEG	111-46-6	> 0.1 - < 5.0
Diisopropanolamine	1,1'-iminodipropan-2-ol Bis(2-hydroxypropyl)amine DIPA	110-97-4	> 0.1 - < 3.0
Diethylene glycol monomethyl ether	Methoxydiglycol DEGME	111-77-3	> 0.1 - < 1.0
2,6-Di-tert-butyl-p-cresol	Butylhydroxytoluene BHT	128-37-0	> 0.1 - < 1.0

The % concentrations for the above listed chemicals will vary from batch to batch. Concentrations listed represent the actual concentration range for each chemical.

### SECTION 4. FIRST-AID MEASURES

#### Description of first aid measures

- Ingestion* : Do not induce vomiting. Never give anything by mouth to an unconscious person. If exposed or concerned: Call a POISON CENTER or doctor/physician.
- Inhalation* : If inhaled, move to fresh air. If breathing is difficult, give oxygen by qualified medical personnel only. If breathing stops, provide artificial respiration. If exposed or concerned: Call a POISON CENTER or doctor/physician.
- Skin contact* : For skin contact, wash with soap and water while removing contaminated clothing. If exposed or concerned: Call a POISON CENTER or doctor/physician. Launder clothing before reuse.
- Eye contact* : Immediately flush eye(s) with plenty of water. If exposed or concerned: Call a POISON CENTER or doctor/physician.

## SAFETY DATA SHEET

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

- : Suspected of damaging the unborn child. Symptoms may include late resorptions, reduced fetal body weight and external, soft tissue and skeletal defects.  
May cause damage to organs. May cause damage to the kidneys if swallowed. Symptoms may include abdominal pain, excess urine production followed by diminished urine production, blood in the urine, tissue death in the kidney and oxalate crystal deposition. Oral toxicity is expected to be greater in humans due to diethylene glycol even though tests with animals show a lower degree of toxicity. The estimated human lethal dose is: 2 oz.  
May cause mild skin irritation. Direct skin contact may cause temporary redness.  
Direct eye contact may cause slight or mild, transient irritation. Exposure may cause temporary irritation, redness or discomfort.  
Mild respiratory irritant. May cause coughing and breathing difficulties.  
Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Ingestion of larger amounts may cause defects to the central nervous system (e.g. dizziness, headache).  
Prolonged or repeated ingestion may cause bladder or kidney stones.  
Prolonged overexposure may cause slight liver effects, such as increased organ weights.

### Indication of any immediate medical attention and special treatment needed

- : Provide general supportive measures and treat symptomatically.

## SECTION 5. FIRE-FIGHTING MEASURES

### Extinguishing media

#### *Suitable extinguishing media*

- : Water spray; Dry chemical; Carbon dioxide (CO<sub>2</sub>); Foam

#### *Unsuitable extinguishing media*

- : Do not use a solid water stream as it may scatter and spread fire.

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

- : Not considered flammable. However, may burn if exposed to extreme heat and flame. May release peroxides on exposure to light and air, or on contact with incompatibles. Vapours are heavier than air and collect in confined and low-lying areas. Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure. Toxic fumes may be released during a fire.

### Hazardous combustion products

- : Carbon oxides; Nitrogen oxides (NO<sub>x</sub>); Ketones; Aldehydes; Organic acids; Phosphorus oxides; Other irritating fumes and smoke.

### 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. Cool closed containers exposed to fire with water spray. 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

- : Keep people away from and upwind of spill/leak. Restrict access to area until completion of clean-up. Wear appropriate protective equipment. Refer to protective measures listed in sections 7 and 8.

### Environmental precautions

- : Prevent product from entering drains, sewers, waterways and soil. Avoid release to the environment.

## SAFETY DATA SHEET

### Methods and material for containment and cleaning up

- : Ventilate the area. Remove all sources of ignition. Prevent further leakage or spillage if safe to do so. For spilled liquids: absorb spill with inert, non-combustible material such as sand, then place into suitable containers. Pick up and transfer to properly labeled containers. Contaminated absorbent material may pose the same hazards as the spilled product. Contact the proper local authorities. . Refer to Section 13 for disposal of contaminated material.

### SECTION 7. HANDLING AND STORAGE

#### Precautions for safe handling

- : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use with adequate ventilation. Wear suitable protective equipment during handling. Wear protective gloves/clothing and eye/face protection. Do not breathe mist or vapor. 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 and can be dangerous.

#### Conditions for safe storage

- : Store in cool/well-ventilated place. 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. Suitable container and packaging materials for safe storage: Carbon steel; Stainless steel; Phenolic lined steel drums. Unsuitable materials for containers: Aluminum; Copper; Galvanized iron; Galvanized steel. Recommended storage temperature: 5 - 35°C (41 - 95°F)

#### Incompatible materials

- : Strong oxidizing agents; Acids; Bases; Halogenated compounds; Alkali metals

### SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

#### Exposure Limits:

<u>Chemical Name</u>	<u>ACGIH TLV</u>		<u>OSHA PEL</u>	
	<u>TWA</u>	<u>STEL</u>	<u>PEL</u>	<u>STEL</u>
Triethylene glycol monobutyl ether	N/Av	N/Av	N/Av	N/Av
Pentaethylene glycol	N/Av	N/Av	N/Av	N/Av
Polyethylene glycol monobutyl ether	N/Av	N/Av	N/Av	N/Av
Diethylene glycol monobutyl ether	10 ppm (inhalable) (vapor)	N/Av	N/Av	N/Av
Diethylene glycol	10 mg/m <sup>3</sup> (AIHA WEEL)	N/Av	N/Av	N/Av
Diisopropanolamine	N/Av	N/Av	N/Av	N/Av
Diethylene glycol monomethyl ether	N/Av	N/Av	N/Av	N/Av
2,6-Di-tert-butyl-p-cresol	2 mg/m <sup>3</sup> (inhalable fraction and vapor)	N/Av	N/Av	N/Av

#### Exposure controls

##### Ventilation and engineering measures

- : Use with adequate ventilation. Apply technical measures to comply with the occupational exposure limits. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. In case of insufficient ventilation wear suitable respiratory equipment.

##### Respiratory protection

- : If airborne concentrations are above the permissible exposure limit or are not known, use NIOSH-approved respirators. Refer to CSA Z94.3 or other appropriate standards. Advice should be sought from respiratory protection specialists.

## SAFETY DATA SHEET

- Skin protection** : Wear protective gloves/clothing. Wear as appropriate: Butyl rubber; Ethyl vinyl alcohol laminate (EVAL); Natural Rubber; Neoprene; Polyvinylchloride. The suitability for a specific workplace should be discussed with the producers of the protective gloves. Wear resistant clothing and boots.
- Eye / face protection** : Wear as appropriate: Tightly fitting safety goggles; Safety glasses with side shields A full face shield may also be necessary.
- Other protective equipment** : Ensure that eyewash stations and safety showers are close to the workstation location. Other equipment may be required depending on workplace standards.
- General hygiene considerations** : Do not breathe mist or vapor. Avoid contact with skin, eyes and clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Remove and wash contaminated clothing before re-use. Handle in accordance with good industrial hygiene and safety practice.

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance** : Colourless to yellow liquid.
- Odour** : Ether like odour.
- Odour threshold** : N/Av
- pH** : N/Av
- Melting/Freezing point** : - 51°C (- 60°F) (estimation)
- Initial boiling point and boiling range** : 260°C (500°F)
- Flash point** : 138°C (280°F)
- Flashpoint (Method)** : Pensky Martens 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
- Oxidizing properties** : None known.
- Explosive properties** : Not explosive
- Vapour pressure** : < 0.010 mmHg @ 20°C (68°F)
- Vapour density** : 6 (Air = 1.0)
- Relative density / Specific gravity** : 1.04 @ 20°C (68°F)
- Solubility in water** : 100% @ 20°C (68°F)
- Other solubility(ies)** : N/Av
- Partition coefficient: n-octanol/water or Coefficient of water/oil distribution** : N/Av
- Auto-ignition temperature** : N/Av
- Decomposition temperature** : N/Av
- Viscosity** : 990 cSt @ - 40°C (- 40°F)
- Volatiles (% by weight)** : N/Av
- Volatile organic Compounds (VOC's)** : N/Av
- Absolute pressure of container** : N/Av
- Flame projection length** : N/Av
- Other physical/chemical comments** : No additional information.

### SECTION 10. STABILITY AND REACTIVITY

- Reactivity** : Not normally reactive.
- Chemical stability** : Stable under normal conditions. May release peroxides on exposure to light and air, or on contact with incompatibles. Rate of peroxide formation is not known.

## SAFETY DATA SHEET

### Possibility of hazardous reactions

: Hazardous polymerization does not occur.

### Conditions to avoid

: Direct sources of heat. Do not use in areas without adequate ventilation. Avoid contact with incompatible materials.

### Incompatible materials

: Strong oxidizing agents; Acids; Bases; Halogenated compounds; Alkali metals

### Hazardous decomposition products

: Peroxides. Refer also to hazardous combustion products, 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

: YES

### Potential Health Effects:

#### Signs and symptoms of short-term (acute) exposure

##### *Sign and symptoms Inhalation*

: Mild respiratory irritant. May cause coughing and breathing difficulties.

##### *Sign and symptoms ingestion*

: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Ingestion of larger amounts may cause defects to the central nervous system (e.g. dizziness, headache).

##### *Sign and symptoms skin*

: May cause mild skin irritation. Direct skin contact may cause temporary redness.

##### *Sign and symptoms eyes*

: Direct eye contact may cause slight or mild, transient irritation. Exposure may cause temporary irritation, redness or discomfort.

Tested according to: OECD Test Guideline 405. According to the classification criteria of Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015), this product is not considered as being corrosive or irritating to the eyes.

#### Potential Chronic Health Effects

: Prolonged or repeated ingestion may cause bladder or kidney stones.  
Prolonged overexposure may cause slight liver effects, such as increased organ weights.

#### Mutagenicity

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

#### Carcinogenicity

: Not classifiable as a human carcinogen.  
No components are listed as carcinogens by ACGIH, IARC, OSHA or NTP.

#### Reproductive effects & Teratogenicity

: This material is classified as hazardous under Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015). Hazardous classification:  
Reproductive toxicity - Category 2. Suspected of damaging the unborn child.  
Contains: Pentaethylene glycol; Diethylene glycol monomethyl ether.  
Diethylene glycol monomethyl ether was found to be fetotoxic, embryotoxic and/or teratogenic in the absence of maternal toxicity, based on animal data.  
Pentaethylene glycol may cause teratogenic effects at doses which are not maternally toxic, based on animal data (read across).  
Symptoms may include late resorptions, reduced fetal body weight and external, soft tissue and skeletal defects.

#### Sensitization to material

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

## SAFETY DATA SHEET

**Specific target organ effects** : This material is classified as hazardous under Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015). Classification:  
Specific target organ toxicity, single exposure  
Category 2. May cause damage to organs.  
May cause damage to the kidneys if swallowed. Symptoms may include abdominal pain, excess urine production followed by diminished urine production, blood in the urine, tissue death in the kidney and oxalate crystal deposition.

Mild effects may be seen in the following organs: Eyes; Skin; Respiratory system; Digestive system; Central nervous system; Liver.

**Medical conditions aggravated by overexposure**

: Pre-existing skin, eye, respiratory and central nervous system disorders.

**Synergistic materials**

: None known or reported by the manufacturer.

**Toxicological data**

: No data is available on the product itself. The calculated ATE values for this mixture are:  
ATE oral = 2616 mg/kg  
ATE dermal = 10 790 mg/kg

See below for individual ingredient acute toxicity data.

<u>Chemical name</u>	<u>LC<sub>50</sub> (4hr)</u> <u>inh, rat</u>	<u>LD<sub>50</sub></u>	
		<u>(Oral, rat)</u>	<u>(Rabbit, dermal)</u>
Triethylene glycol monobutyl ether	No data available. Not expected to be harmful.	5300 mg/kg	> 2000 mg/kg (No mortality)
Pentaethylene glycol	No data available. Not expected to be harmful.	> 16 000 mg/kg (rat) The estimated human lethal dose is: 1110 - 1665 mg/kg [Read-across (Analogy): Ethylene glycol]	> 18 200 mg/kg
Polyethylene glycol monobutyl ether	> 50 mg/L (aerosol)	> 2000 mg/kg	3540 mg/kg
Diethylene glycol monobutyl ether	No data available. Not expected to be harmful.	6560 mg/kg	2764 mg/kg
Diethylene glycol	> 4.6 mg/L (aerosol) (No mortality)	19 600 mg/kg (rat) The estimated human lethal dose is: 500 - 5000 mg/kg	12 500 mg/kg
Diisopropanolamine	> 1.552 mg/L (aerosol) (No mortality)	> 2000 - 3980 mg/kg	16 000 mg/kg
Diethylene glycol monomethyl ether	> 50 mg/L (aerosol)	6830 mg/kg	9404 mg/kg
2,6-Di-tert-butyl-p-cresol	No data available. Not expected to be harmful.	> 6000 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. The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters. The product contains the following substances which are hazardous for the environment:  
2,6-di-tert-butyl-p-cresol (BHT).

See the following tables for individual ingredient ecotoxicity data.

## SAFETY DATA SHEET

## Ecotoxicity data:

<u>Ingredients</u>	CAS No	Toxicity to Fish		
		LC50 / 96h	NOEC / 21 day	M Factor
Triethylene glycol monobutyl ether	143-22-6	2400 mg/L	N/Av	None.
Pentaethylene glycol	4792-15-8	> 50 000 mg/L (Fathead minnow)	N/Av	None.
Polyethylene glycol monobutyl ether	9004-77-7	> 1800 mg/L (Turbot)	N/Av	None.
Diethylene glycol monobutyl ether	112-34-5	1300 mg/L (Bluegill sunfish)	N/Av	None.
Diethylene glycol	111-46-6	77 900 mg/L (Fathead minnow)	7694 mg/L (30 days) (QSAR)	None.
Diisopropanolamine	110-97-4	1466 mg/L (Zebra fish)	N/Av	None.
Diethylene glycol monomethyl ether	111-77-3	5700 mg/L (Fathead minnow)	N/Av	None.
2,6-Di-tert-butyl-p-cresol	128-37-0	> 0.57 mg/L (Zebra fish) (no deaths)	0.053 mg/L/42 days (Japanese ricefish)	1

<u>Ingredients</u>	CAS No	Toxicity to Daphnia		
		EC50 / 48h	NOEC / 21 day	M Factor
Triethylene glycol monobutyl ether	143-22-6	2210 mg/L (Daphnia magna)	N/Av	None.
Pentaethylene glycol	4792-15-8	> 20 000 mg/L (Daphnia magna)	7500 - 15 000 mg/L (Read-across)	None.
Polyethylene glycol monobutyl ether	9004-77-7	3200 mg/L (Daphnia magna) (QSAR)	N/Av	None.
Diethylene glycol monobutyl ether	112-34-5	> 100 mg/L (Daphnia magna)	N/Av	None.
Diethylene glycol	111-46-6	> 100 mg/L (Daphnia magna)	7500 - 15 000 mg/L (Read-across)	None.
Diisopropanolamine	110-97-4	277.7 mg/L (Daphnia magna)	N/Av	None.
Diethylene glycol monomethyl ether	111-77-3	1192 mg/L (Daphnia magna)	N/Av	None.
2,6-Di-tert-butyl-p-cresol	128-37-0	0.48 mg/L (Daphnia magna)	0.023 mg/L	1

<u>Ingredients</u>	CAS No	Toxicity to Algae		
		EC50 / 96h or 72h	NOEC / 96h or 72h	M Factor
Triethylene glycol monobutyl ether	143-22-6	> 500 mg/L/72hr (Green algae)	N/Av	None.
Pentaethylene glycol	4792-15-8	6500 - 13 000 mg/L/96hr (Green algae) (Read-across)	> 100 mg/L/72hr (Read-across)	None.
Polyethylene glycol monobutyl ether	9004-77-7	391 mg/L/72hr (Skeletonema costatum)	N/Av	None.
Diethylene glycol monobutyl ether	112-34-5	> 100 mg/L/96hr (Green algae)	≥ 100 mg/L/96hr	None.
Diethylene glycol	111-46-6	9362 mg/L/96hr (Green algae) (QSAR)	> 100 mg/L/72hr (Read-across)	None.
Diisopropanolamine	110-97-4	339 mg/L/72hr (Green algae)	125mg/L (Green algae)	None.
Diethylene glycol monomethyl ether	111-77-3	> 500 mg/L/72hr (Green algae)	N/Av	None.

## SAFETY DATA SHEET

2,6-Di-tert-butyl-p-cresol	128-37-0	0.758 mg/L/96hr (QSAR)	0.4 mg/L/72hr	1
----------------------------	----------	------------------------	---------------	---

**Persistence and degradability**

- : The product itself has not been tested.  
 The following ingredients are considered to be readily biodegradable: Triethylene glycol monobutyl ether; Polyethylene glycol monobutyl ether; Diethylene glycol monobutyl ether; Diethylene glycol; Diisopropanolamine; Diethylene glycol monomethyl ether.  
 Contains the following chemicals which are considered to be inherently biodegradable: Pentaethylene glycol.  
 Contains the following chemicals which are not readily biodegradable: 2,6-di-tert-butyl-p-cresol (BHT).

**Bioaccumulation potential**

- : The product itself has not been tested. See the following data for ingredient information.

<u>Components</u>	<u>Partition coefficient n-octanol/water (log Kow)</u>	<u>Bioconcentration factor (BCF)</u>
Triethylene glycol monobutyl ether (CAS 143-22-6)	0.51	3 (Fish) (estimated)
Pentaethylene glycol (CAS 4792-15-8)	- 2.3	0.5 (estimated)
Polyethylene glycol monobutyl ether (CAS 9004-77-7)	2.73	N/Av
Diethylene glycol monobutyl ether (CAS 112-34-5)	1.0	3.0
Diethylene glycol (CAS 111-46-6)	- 1.47 (estimated)	3 (estimated)
Diisopropanolamine (CAS 110-97-4)	- 0.82	3.0 (estimated)
Diethylene glycol monomethyl ether (CAS 111-77-3)	- 1.18	3.0
2,6-Di-tert-butyl-p-cresol (CAS 128-37-0)	5.1	781 - 839 (common carp)

**Mobility in soil**

- : The product itself has not been tested.

**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**

- : Refer to protective measures listed in sections 7 and 8.  
 Dispose of in accordance with local regulations. Empty containers retain residue (liquid and/or vapour) and can be dangerous.

**Methods of Disposal**

- : Dispose of in accordance with federal, provincial and local hazardous waste laws.

## 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.				

- Special precautions for user** : Appropriate advice on safety must accompany the package.

## 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)
- 2,6-di-tert-butyl-p-cresol (BHT) (Part 1, Group A Substance)
- Diethylene glycol monomethyl ether (Part 1, Group A Substance)

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:

<u>Ingredients</u>	CAS #	European EINECS	Australia AICS	Philippines PICCS	Japan ENCS	Korea KECI/KECL	China IECSC	New Zealand IOC
Triethylene glycol monobutyl ether	143-22-6	205-592-6	Present	Present	(7)-97; (2)-436	KE-04140	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.
Pentaethylene glycol	4792-15-8	225-341-4	Present	Present	(2)-441	KE-33647	Present	May be used as a single component chemical under an appropriate group standard.
Polyethylene glycol monobutyl ether	9004-77-7	500-012-0	Present	Present	(7)-97	KE-04310	Present	HSR003673
Diethylene glycol monobutyl ether	112-34-5	203-961-6	Present	Present	(7)-97; (2)-422	KE-10466	Present	HSR001075
Diethylene glycol	111-46-6	203-872-2	Present	Present	(2)-415; (2)-2979	KE-27694	Present	HSR002709
Diisopropanolamine	110-97-4	203-820-9	Present	Present	(2)-309	KE-20968	Present	HSR004053
Diethylene glycol monomethyl ether	111-77-3	203-906-6	Present	Present	(7)-97; (2)-422; (2)-2979	KE-23278	Present	HSR002752
2,6-Di-tert-butyl-p-cresol	128-37-0	204-881-4	Present	Present	(9)-1805; (5)-6372; (3)-540	KE-03079	Present	HSR002784

### SECTION 16. OTHER INFORMATION

**Legend** : ACGIH: American Conference of Governmental Industrial Hygienists  
 AIHA: American Industrial Hygiene Association  
 AICS: Australian Inventory of Chemical Substances  
 ATE: Acute Toxicity Estimate  
 CAS: Chemical Abstract Services  
 CSA: Canadian Standards Association

## SAFETY DATA SHEET

EC50: Effective Concentration 50%  
EINECS: European Inventory of Existing Commercial chemical Substances  
ENCS: Existing and New Chemical Substances  
HSDB: Hazardous Substances Data Bank  
IARC: International Agency for Research on Cancer  
IBC: Intermediate Bulk Container  
IECSC: Inventory of Existing Chemical Substances  
IMDG: International Maritime Dangerous Goods  
IOC: Inventory of Chemicals  
KECI: Korean Existing Chemicals Inventory  
KECL: Korean Existing Chemicals List  
LC: Lethal Concentration  
LD: Lethal Dose  
N/Ap: Not Applicable  
N/Av: Not Available  
NIOSH: National Institute of Occupational Safety and Health  
NOEC: No observable effect concentration  
NTP: National Toxicology Program  
OECD: Organisation for Economic Co-operation and Development  
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  
TSCA: Toxic Substance Control Act  
TWA: Time Weighted Average  
WEEL: Workplace Environmental Exposure Level  
WHMIS: Workplace Hazardous Materials Identification System

**References** : 1. ACGIH, Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices for 2017.  
2. International Agency for Research on Cancer Monographs, searched 2017.  
3. Canadian Centre for Occupational Health and Safety, CCHInfoWeb 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)** : 02/01/2017

**Reviewed Date SDS (dd/mm/yyyy)** : 18/05/2017

**Revision No.** : 2

**Revision Information** : (M)SDS sections updated:  
2. HAZARDS IDENTIFICATION;  
3. COMPOSITION/INFORMATION ON INGREDIENTS;  
4. FIRST AID MEASURES;  
8. EXPOSURE CONTROLS / PERSONAL PROTECTION;  
11. TOXICOLOGICAL INFORMATION;  
12. ECOLOGICAL INFORMATION

**Other special considerations for handling** : Provide adequate information, instruction and training for operators.

**SAFETY DATA SHEET**

<b>Prepared for:</b> 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.	
<b>Prepared by:</b> ICC The Compliance Center Inc. Telephone: (888) 442-9628 (U.S.); (888) 977-4834 (Canada) <a href="http://www.thecompliancecenter.com">http://www.thecompliancecenter.com</a>	

**DISCLAIMER**

This Safety Data Sheet was prepared by ICC The Compliance Center Inc. using information provided by Radiator Specialty Co. of Canada and CCOHS' Web Information Service. The information in the Safety Data Sheet is offered for your consideration and guidance when exposed to this product. ICC The Compliance Center Inc and Radiator Specialty Co. of Canada expressly disclaim all expressed or implied warranties and assume no responsibilities for the accuracy or completeness of the data contained herein. The data in this SDS does not apply to use with any other product or in any other process.

This Safety Data Sheet may not be changed, or altered in any way without the expressed knowledge and permission of ICC The Compliance Center Inc. and Radiator Specialty Co. of Canada.

**END OF DOCUMENT**