

Radiator Flush

Safety Data Sheet

according to the Hazardous Products Regulation (February 11, 2015)

Date of issue: 01/12/2018

Revision date: 01/12/2018

Version: 1.0

SECTION 1: Identification

1.1. Product identifier

Product form : Mixture
Product name : Radiator Flush
Product code : 713

1.2. Recommended use and restrictions on use

Recommended use : Radiator flush

1.3. Supplier

Kleen-Flo Tumbler Industries Ltd.
75 Advance Blvd.
L6T 4N1 Brampton - Canada
T (905) 793-4311

1.4. Emergency telephone number

Emergency number : CANUTEC 613-996-6666

Guidelines for SDS Use: The product described in this SDS is a consumer product. It is safe for use by consumers as described on the product label under normal foreseeable conditions. This SDS is designed to provide additional valuable safety and handling information.

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

Classification (GHS-CA)

Serious eye damage/eye irritation, Category 1 H318
Reproductive toxicity, Category 2 H361

2.2. GHS Label elements, including precautionary statements

GHS-CA labelling

Hazard pictograms (GHS-CA) :



Signal word (GHS-CA) : Danger

Hazard statements (GHS-CA) : H318 - Causes serious eye damage.
H361 - Suspected of damaging fertility or the unborn child.

Precautionary statements (GHS-CA) : P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 - IF exposed or concerned: Get medical advice/attention.
P310 - Immediately call a POISON CENTER or doctor.
P405 - Store locked up.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-CA)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%
Alcohols, C9-11, ethoxylated	(CAS-No.) 68439-46-3	3-7
Disodium carbonate	(CAS-No.) 497-19-8	1-5

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Name	Product identifier	%
Disodium tetraborate pentahydrate	(CAS-No.) 12179-04-3	0.5-1.5

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures after inhalation	: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.
First-aid measures after skin contact	: If skin irritation occurs: Wash skin with plenty of water. Obtain medical attention if irritation persists.
First-aid measures after eye contact	: 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/doctor.
First-aid measures after ingestion	: Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation	: May cause irritation to the respiratory tract.
Symptoms/effects after skin contact	: May cause skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.
Symptoms/effects after eye contact	: Causes serious eye damage. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva. May cause burns.
Symptoms/effects after ingestion	: May be harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea.

4.3. Immediate medical attention and special treatment, if necessary

Other medical advice or treatment	: Symptoms may be delayed. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
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SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

Suitable extinguishing media	: Use extinguishing media appropriate for surrounding fire.
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5.2. Unsuitable extinguishing media

Unsuitable extinguishing media	: None known.
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5.3. Specific hazards arising from the hazardous product

Fire hazard	: Products of combustion may include, and are not limited to: oxides of carbon.
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5.4. Special protective equipment and precautions for fire-fighters

Protection during firefighting	: Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.
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6.2. Methods and materials for containment and cleaning up

For containment	: Contain spill, then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).
Methods for cleaning up	: Sweep or shovel spills into appropriate container for disposal. Provide ventilation.

6.3. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection"

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes. Do not swallow. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Handle and open container with care.
Hygiene measures	: Wash contaminated clothing before reuse. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	: Keep out of the reach of children. Keep container tightly closed. Store locked up.
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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Disodium tetraborate pentahydrate (12179-04-3)		
USA - ACGIH	ACGIH TWA (mg/m ³)	2 mg/m ³ (inhalable particulate matter)
USA - ACGIH	ACGIH STEL (mg/m ³)	6 mg/m ³ (inhalable particulate matter)

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.
Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Wear suitable gloves

Eye protection:

Wear eye/face protection

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Other information:

Handle in accordance with good industrial hygiene and safety procedures. Do not eat, drink or smoke when using this product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Bright fluorescent yellow liquid
Colour	: Bright fluorescent yellow
Odour	: Odourless
Odour threshold	: No data available
pH	: 9 - 10.5
Relative evaporation rate (butylacetate=1)	: No data available
Relative evaporation rate (ether=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: > 100 °C
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Vapour pressure at 50 °C	: No data available
Relative density	: 1.065 - 1.075
Solubility	: No data available
Partition coefficient n-octanol/water	: No data available
Viscosity, kinematic	: 2.5 cSt
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	: No dangerous reactions known under normal conditions of use.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No dangerous reactions known under normal conditions of use.

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Conditions to avoid	: Heat.
Incompatible materials	: None known.
Hazardous decomposition products	: May include, and are not limited to: oxides of carbon.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified.
Acute toxicity (dermal)	: Not classified.
Acute toxicity (inhalation)	: Not classified.

Alcohols, C9-11, ethoxylated (68439-46-3)

LD50 oral rat	1400 mg/kg
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Disodium carbonate (497-19-8)

LD50 oral rat	4090 mg/kg
LC50 inhalation rat	2300 mg/m ³ (Exposure time: 2 h)

Disodium tetraborate pentahydrate (12179-04-3)

LD50 oral rat	2403 mg/kg
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Skin corrosion/irritation	: Not classified. pH: 9 - 10.5
Serious eye damage/irritation	: Causes serious eye damage. pH: 9 - 10.5
Respiratory or skin sensitization	: Not classified.
Germ cell mutagenicity	: Not classified.
Carcinogenicity	: Not classified.
Reproductive toxicity	: Suspected of damaging fertility or the unborn child.
STOT-single exposure	: Not classified.
STOT-repeated exposure	: Not classified.
Aspiration hazard	: Not classified.

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Viscosity, kinematic (calculated value) (40 °C)	2.5 mm ² /s
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Symptoms/effects after inhalation	: May cause irritation to the respiratory tract.
Symptoms/effects after skin contact	: May cause skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.
Symptoms/effects after eye contact	: Causes serious eye damage. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva. May cause burns.
Symptoms/effects after ingestion	: May be harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Other information	: Likely routes of exposure: ingestion, inhalation, skin and eye.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: May cause long-term adverse effects in the aquatic environment.
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Disodium carbonate (497-19-8)

LC50 fish 1	300 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
LC50 fish 2	310 - 1220 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 Daphnia 1	265 mg/l (Exposure time: 48 h - Species: Daphnia magna)

12.2. Persistence and degradability

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Persistence and degradability	Not established.
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12.3. Bioaccumulative potential

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Bioaccumulative potential	Not established.
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Disodium carbonate (497-19-8)

BCF fish 1	(no bioaccumulation)
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12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Ozone : Not classified.
Other information : No other effects known.

SECTION 13: Disposal considerations

13.1. Disposal methods

Product/Packaging disposal recommendations : Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

SECTION 14: Transport information

14.1. Basic shipping description

In accordance with TDG

Transportation of Dangerous Goods

Not regulated for transport

14.2. Transport information/DOT

No additional information available

14.3. Air and sea transport

No additional information available

SECTION 15: Regulatory information

15.1. National regulations

All components of this product are listed, or excluded from listing, on the Canadian DSL (Domestic Substances List) and NDSL (Non-Domestic Substances List) inventories except for:

Disodium tetraborate pentahydrate	CAS-No. 12179-04-3
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15.2. International regulations

No additional information available

SECTION 16: Other information

Date of issue : 01/12/2018
Revision date : 01/12/2018
Other information : None.
Prepared by : Kleen-Flo Tumbler Ind. Ltd.

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