



# MATERIAL SAFETY DATA SHEET

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## Section 1: Product & Company Identification

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**Product Name:** Radiator Flush

**Product Number (s):** 05337

**Product Use:** Radiator cleaner

### Manufacturer / Supplier Contact Information:

In United States:

CRC Industries, Inc.

885 Louis Drive

Warminster, PA 18974

[www.crcindustries.com](http://www.crcindustries.com)

1-215-674-4300 (General)

(800) 521-3168 (Technical)

(800) 272-4620 (Customer Service)

In Canada:

CRC Canada Co.

2-1246 Lorimar Drive

Mississauga, Ontario L5S 1R2

[www.crc-canada.ca](http://www.crc-canada.ca)

1-905-670-2291

In Mexico:

CRC Industries Mexico

Av. Benito Juárez 4055 G

Colonia Orquídea

San Luís Potosí, SLP CP 78394

[www.crc-mexico.com](http://www.crc-mexico.com)

52-444-824-1666

24-Hr Emergency – CHEMTREC: (800) 424-9300 or (703) 527-3887

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## Section 2: Hazards Identification

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### Emergency Overview

**WARNING:** May cause eye irritation  
Appearance & Odor: Yellow liquid, pleasant odor

### Potential Health Effects:

**ACUTE EFFECTS:**

**EYE:** May cause mild irritation to the eyes.

**SKIN:** No acute effects expected. However, prolonged contact may cause mild irritation.

**INHALATION:** No health effects expected under normal conditions of use.

**INGESTION:** Generally non-toxic if ingested in small amounts. May cause vomiting, diarrhea or gastrointestinal discomfort.

**CHRONIC EFFECTS:** Unknown

**TARGET ORGANS:** Unknown

**Medical Conditions Aggravated by Exposure:** Unknown

See Section 11 for toxicology and carcinogenicity information on product ingredients.

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### Section 3: Composition/Information on Ingredients

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COMPONENT	CAS NUMBER	% by Wt.
Water	7732-18-5	> 95
Amines, tallow alkyl, ethoxylated	61791-26-2	< 1
Sodium tetraborate pentahydrate	11130-12-4	< 1

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### Section 4: First Aid Measures

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Eye Contact: Immediately flush with plenty of water for 15 minutes. Call a physician if irritation persists.

Skin Contact: Remove contaminated clothing and wash affected area with soap and water. Call a physician if irritation persists. Wash contaminated clothing prior to re-use.

Inhalation: Remove person to fresh air. Keep person calm. If not breathing, give artificial respiration. If breathing is difficult give oxygen. Call a physician.

Ingestion: If swallowed, DO NOT induce vomiting. Give victim a glass of water. If severe symptoms develop, get medical attention immediately.

*Note to Physicians:* None

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### Section 5: Fire-Fighting Measures

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**Flammable Properties:** As defined by OSHA, this product is non-flammable.

Flash Point:	None (TCC)	Upper Explosive Limit:	None
Autoignition Temperature:	None	Lower Explosive Limit:	None

#### **Fire and Explosion Data:**

Suitable Extinguishing Media: This material will not burn. Use extinguishing media appropriate for the surrounding fire.

Products of Combustion: If heated, product may product carbon oxides and nitrogen oxides.

Explosion Hazards: Containers, when exposed to heat from fire, may build pressure and rupture.

Protection of Fire-Fighters: Firefighters should wear self-contained, NIOSH-approved breathing apparatus for protection against suffocation and possible toxic decomposition products. Proper eye and skin protection should be provided. Use water spray to keep fire-exposed containers cool and to knock down vapors which may result from product decomposition.

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### Section 6: Accidental Release Measures

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Personal Precautions: Use personal protection recommended in Section 8.

Environmental Precautions: Take precautions to prevent contamination of ground and surface waters. Do not flush into sewers or storm drains. This product may be harmful to aquatic life.

Methods for Containment & Clean-up: Dike area to contain spill. Ventilate the area with fresh air. If in confined space or limited air circulation area, clean-up workers should wear appropriate respiratory protection. Recover or absorb spilled material using an absorbent designed for chemical spills. Place used absorbents into proper waste containers.

## **Section 7: Handling and Storage**

Handling Procedures: Avoid contact with eyes, skin and clothing. Properly clean any spilled residue with a wet cloth. Wash hands after use and before handling food items. For product use instructions, please see the product label.

Storage Procedures: Store in a cool dry area out of direct sunlight. Keep container closed when not in use.

Aerosol Storage Level: NA

## **Section 8: Exposure Controls/Personal Protection**

### **Exposure Guidelines:**

COMPONENT	OSHA		ACGIH		OTHER		UNIT
	TWA	STEL	TWA	STEL	TWA	SOURCE	
Water	NE	NE	NE	NE	NE		
Amines, tallow alkyl, ethoxylated	NE	NE	NE	NE	NE		
Sodium tetraborate pentahydrate	NE	NE	NE	NE	NE		
N.E. – Not Established      (c) – ceiling      (s) – skin      (v) – vacated							

### **Controls and Protection:**

Engineering Controls: Area should have ventilation to provide fresh air. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at the source, preventing dispersion into the general work area. Use mechanical means if necessary to maintain vapor levels below the exposure guidelines. If working in a confined space, follow applicable OSHA regulations.

Respiratory Protection: None required for normal work where adequate ventilation is provided. Use a self-contained breathing apparatus in confined spaces and for emergencies.

Eye/face Protection: For normal conditions, wear safety glasses. Where there is reasonable probability of liquid contact, wear splash-proof goggles.

Skin Protection: Use protective gloves such as nitrile, neoprene or rubber. Also, use full protective clothing if there is prolonged or repeated contact of liquid with skin.

## **Section 9: Physical and Chemical Properties**

Physical State: liquid  
 Color: yellow  
 Odor: pleasant  
 Odor Threshold: ND  
 Specific Gravity: 1.00  
 Initial Boiling Point: 212°F / 100°C  
 Freezing Point: 32°F / 0°C  
 Vapor Pressure: ND  
 Vapor Density: ND (air = 1)  
 Evaporation Rate: slow  
 Solubility: Soluble in water  
 Coefficient of water/oil distribution: ND  
 pH: 10.0  
 Volatile Organic Compounds: wt %: 0      g/L: 0      lbs./gal: 0

## Section 10: Stability and Reactivity

Stability: Stable

Conditions to Avoid: None

Incompatible Materials: Strong oxidizers, acids

Hazardous Decomposition Products: None known

Possibility of Hazardous Reactions: No

## Section 11: Toxicological Information

Long-term toxicological studies have not been conducted for this product. The following information is available for components of this product.

### Acute Toxicity:

Component	Oral LD50 (rat)	Dermal LD50 (rabbit)	Inhalation LC50 (rat)
Water	> 90 mL/kg	No data	No data
Amines, tallow alkyl, ethoxylated	> 1200 mg/kg	No data	No data
Sodium tetraborate pentahydrate	3200 mg/kg	> 2000 mg/kg	No data

### Chronic Toxicity:

Component	OSHA Carcinogen	IARC Carcinogen	NTP Carcinogen	Irritant	Sensitizer
Water	No	No	No	No	No
Amines, tallow alkyl, ethoxylated	No	No	No	E & S (severe)	yes
Sodium tetraborate pentahydrate	No	No	No	E (mild)	unknown

E – Eye	S – Skin	R - Respiratory
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Reproductive Toxicity: No information available

Teratogenicity: No information available

Mutagenicity: No information available

Synergistic Effects: No information available

## Section 12: Ecological Information

Ecological studies have not been conducted for this product. The following information is available for components of this product.

Ecotoxicity: Amines, tallow alkyl, ethoxylated - 48 Hr EC50 Daphnia magna: 0.011 mg/L

Persistence / Degradability: No information available

Bioaccumulation / Accumulation: No information available

Mobility in Environment: No information available

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## **Section 13: Disposal Considerations**

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**Waste Classification:** This product is not a RCRA hazardous waste (See 40 CFR Part 261.20 – 261.33). Wastes should be collected and properly disposed. Do not dump into bodies of water or on the ground. Empty containers may be recycled.

All disposal activities must comply with federal, state, provincial and local regulations. Local regulations may be more stringent than state, provincial or national requirements.

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## **Section 14: Transport Information**

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US DOT (ground): Not regulated

ICAO/IATA (air): Not regulated

IMO/IMDG (water): Not regulated

Special Provisions: None

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## **Section 15: Regulatory Information**

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### **U.S. Federal Regulations:**

#### Toxic Substances Control Act (TSCA):

All ingredients are either listed on the TSCA inventory or are exempt.

#### Comprehensive Environmental Response, Compensation and Liability Act (CERCLA):

Reportable Quantities (RQ's) exist for the following ingredients: None

**Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.**

#### Superfund Amendments Reauthorization Act (SARA) Title III:

Section 302 Extremely Hazardous Substances (EHS): None

Section 311/312 Hazard Categories:	Fire Hazard	No
	Reactive Hazard	No
	Release of Pressure	No
	Acute Health Hazard	No
	Chronic Health Hazard	No

Section 313 Toxic Chemicals: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:  
None

#### Clean Air Act:

Section 112 Hazardous Air Pollutants (HAPs): None

#### Occupational Safety and Health Administration:

This product is regulated by the Hazard Communications Standard.

### **U.S. State Regulations:**

California Safe Drinking Water and Toxic Enforcement Act (Prop 65):

This product may contain the following chemicals known to the state of California to cause cancer, birth defects or other reproductive harm: None  
None

Consumer Products VOC Regulations: This product is not regulated.

State Right to Know:

New Jersey: None  
Pennsylvania: None  
Massachusetts: None  
Rhode Island : None

Canadian Regulations:

Controlled Products Regulations:

This product has been classified in accordance with the hazard criteria of the Controlled Product Regulation and the MSDS contains all the information required by the Controlled Products Regulations.

WHMIS Hazard Class: Not regulated

Canadian DSL Inventory: All ingredients are either listed on the DSL Inventory or are exempt.

European Union Regulations:

RoHS Compliance: This product is compliant with Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003. This product does not contain any of the restricted substances as listed in Article 4(1) of the RoHS Directive.

Additional Regulatory Information: None

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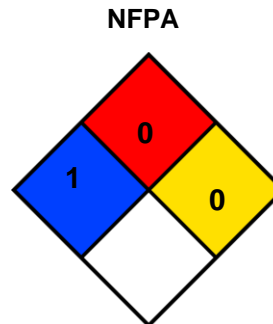
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**Section 16: Other Information**

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HMIS® (II)	
Health:	1
Flammability:	0
Reactivity:	0
PPE:	B



Ratings range from 0 (no hazard) to 4 (severe hazard)

Prepared By: Michelle Rudnick  
CRC #: 613A  
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Changes since last revision: MSDS reformatted to meet the requirements of the Canadian Controlled Products Regulations.

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC Industries' knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label. For further clarification of any information contained on this MSDS consult your supervisor, a health & safety professional, or CRC Industries.

ACGIH:	American Conference of Governmental Industrial Hygienists	NA:	Not Applicable
CAS:	Chemical Abstract Service	ND:	Not Determined
CFR:	Code of Federal Regulations	NIOSH:	National Institute of Occupational Safety & Health
DOT:	Department of Transportation	NFPA:	National Fire Protection Association
DSL:	Domestic Substance List	NTP:	National Toxicology Program
g/L:	grams per Liter	OSHA:	Occupational Safety and Health Administration
HMIS:	Hazardous Materials Identification System	PMCC:	Pensky-Martens Closed Cup
IARC:	International Agency for Research on Cancer	PPE:	Personal Protection Equipment
IATA:	International Air Transport Association	ppm:	Parts per Million
ICAO:	International Civil Aviation Organization	RoHS:	Restriction of Hazardous Substances
IMDG:	International Maritime Dangerous Goods	STEL:	Short Term Exposure Limit
IMO:	International Maritime Organization	TCC:	Tag Closed Cup
lbs./gal:	pounds per gallon	TWA:	Time Weighted Average
LC:	Lethal Concentration	WHMIS:	Workplace Hazardous Materials Information System
LD:	Lethal Dose		