



# SAFETY DATA SHEET

Revision Date: 22-Nov-2016

Version: 1

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

### Product identifier

**Product Label Name** Radiator Relief  
**Product Generic Name** Radiator Coolant Additive  
**Other means of identification**  
**UPC Code(s)** 607078401045, 607078402004  
**Synonyms** None

### Recommended use of the chemical and restrictions on use

**Recommended Use** Coolant Additive for Radiator  
**Uses advised against** Follow label instructions. Not recommended for any use except intended use.

### Supplier's details

<b>Supplier Address</b> Design Engineering, Inc. 604 Moore Road, Avon Lake, OH 44012	<b>Manufacturer Address</b> Design Engineering, Inc. 604 Moore Road, Avon Lake, OH 44012
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### Emergency telephone number

**Company Phone Number** 1-800-264-9472 (M-F 8:30AM - 5:00PM EST)  
**Company Emergency Phone Number** Propharma: 1-800-565-5597 (24 hours)  
**Emergency telephone** Chemtrec (US/CA) 1-800-424-9300 (24 hour)  
Poison Control 1-800-222-1222 (24 hour)

## 2. HAZARDS IDENTIFICATION

### Classification

#### **OSHA Regulatory Status**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Serious eye damage/eye irritation	Category 1
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### GHS Label elements, including precautionary statements

#### **Emergency Overview**

<b>Danger</b>  <b>Hazard Statements</b> Causes serious eye damage
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**Appearance** Viscous liquid **Physical state** liquid **Odor** Characteristic

**Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling

**Precautionary Statements - Response**

Get medical advice/attention if you feel unwell

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
If eye irritation persists: Get medical advice/attention

**Precautionary Statements - Storage**

Store in a well-ventilated place. Keep container tightly closed

**Precautionary Statements - Disposal**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Hazards not otherwise classified (HNOC)**

Not applicable

**Other information**

General Hazards No information available

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	CAS-No	Weight %	Trade Secret
ALCOHOLS, C10-16, ETHOXYLATED	68002-97-1	5 - 10	
Sodium carbonate	497-19-8	1 - 5	
Ethyl alcohol	64-17-5	1 - 5	

\*The exact percentage (concentration) of composition has been withheld as a trade secret

**4. FIRST AID MEASURES**

**First aid measures for different exposure routes**

**General advice** For further assistance, contact your local Poison Control Center.

**Eye contact** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.

**Skin contact** Wash skin with soap and water.

**Toxic - Inhalation** Not expected.

**Ingestion** Clean mouth with water and drink afterwards plenty of water. Do NOT induce vomiting. If symptoms persist, call a physician.

**Protection of First-aiders** Use personal protective equipment.

**Most important symptoms/effects, acute and delayed**

**Main Symptoms** No information available.

**Indication of immediate medical attention and special treatment needed, if necessary**

**Notes to physician** Treat symptomatically.

## 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable Extinguishing Media** None.

**Specific hazards arising from the chemical**

No information available.

**Hazardous Combustion Products** No information available.

**Explosion Data**

**Sensitivity to Mechanical Impact** None.

**Sensitivity to Static Discharge** None.

**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Avoid contact with the skin and the eyes.

**Advice for emergency responders** For personal protection see section 8.

**Environmental precautions**

**Environmental precautions** See Section 12 for additional Ecological Information.

**Methods and materials for containment and cleaning up**

**Methods for Containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly. After cleaning, flush away traces with water.

## 7. HANDLING AND STORAGE

**Precautions for safe handling**

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice.

**Conditions for safe storage, including any incompatibilities**

**Technical measures/Storage conditions** Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children.

**Packaging material** Keep consumer product in packaging product is initially sold in.

**Incompatible products** None known based on information supplied.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

#### Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Ethyl alcohol 64-17-5	STEL: 1000 ppm	TWA: 1000 ppm TWA: 1900 mg/m <sup>3</sup> (vacated) TWA: 1000 ppm (vacated) TWA: 1900 mg/m <sup>3</sup>	IDLH: 3300 ppm TWA: 1000 ppm TWA: 1900 mg/m <sup>3</sup>

#### Appropriate engineering controls

**Engineering Measures**                      Showers  
    Eyewash stations  
    Ventilation systems.

#### Individual protection measures, such as personal protective equipment

**Eye/Face Protection**                      Safety glasses with side-shields.

**Skin and body protection**                No special protective equipment required.

**Respiratory protection**                 No special protective equipment required. If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn.

**Hygiene measures**                         Handle in accordance with good industrial hygiene and safety practice.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Physical and chemical properties

<b>Physical state</b>	liquid	<b>Odor</b>	Characteristic
<b>Appearance</b>	Viscous liquid	<b>Odor threshold</b>	No information available
<b>Color</b>	clear		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	11	
Melting point	No information available	
Boiling point/boiling range	No information available	
Flash Point	No information available	
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limits in Air		
Upper Flammability Limit	No information available	
Lower Flammability Limit	No information available	
Vapor pressure	No information available	
Vapor density	No information available	
Specific Gravity	1.039	
Water solubility	Soluble in water	
Solubility in other solvents	No information available	
Partition coefficient: n-octanol/water	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Viscosity, kinematic	No information available	
Viscosity, dynamic	500 mPa s	
Explosive properties	No information available	
Oxidizing Properties	No information available	

#### Other information

**Softening point**                              No information available

<b>Molecular weight</b>	No information available
<b>VOC Content(%)</b>	No information available
<b>Density</b>	No information available
<b>Bulk Density</b>	No information available

## 10. STABILITY AND REACTIVITY

**Reactivity**  
Not expected

**Chemical stability**  
Stable under recommended storage conditions.

**Possibility of hazardous reactions**

None under normal processing.  
**Hazardous Polymerization**      None under normal processing.

**Conditions to Avoid**  
Extremes of temperature and direct sunlight.

**Incompatible Materials**  
None known based on information supplied.

**Hazardous Decomposition Products**  
None known based on information supplied.

## 11. TOXICOLOGICAL INFORMATION

**Information on likely routes of exposure**

<b>Product Information</b>	There is no data available for this product
<b>Toxic - Inhalation</b>	None known.
<b>Eye contact</b>	Irritating to eyes. Severely irritating to eyes.
<b>Skin contact</b>	Prolonged contact may cause redness and irritation.
<b>Ingestion</b>	May be harmful if swallowed.

**Component Information**

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sodium carbonate 497-19-8	= 4090 mg/kg ( Rat )	-	= 2300 mg/m <sup>3</sup> ( Rat ) 2 h
Ethyl alcohol 64-17-5	= 7060 mg/kg ( Rat )		= 124.7 mg/L ( Rat ) 4 h

**Information on toxicological effects**

**Symptoms**      No information available.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Skin corrosion/irritation**      No information available.  
**Eye damage/irritation**      No information available.  
**Sensitization**      No information available.  
**Germ cell mutagenicity**      No information available.  
**Carcinogenicity**      The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Ethyl alcohol 64-17-5	A3	Group 1	Known	X

**ACGIH:** (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

**IARC:** (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

**NTP:** (National Toxicity Program)

*Known - Known Carcinogen*

**OSHA: (Occupational Safety & Health Administration)**

X - Present

<b>Reproductive toxicity</b>	No information available.
<b>Developmental Toxicity</b>	No information available.
<b>STOT - single exposure</b>	No information available.
<b>STOT - repeated exposure</b>	No information available.
<b>Chronic toxicity</b>	Ethanol has been shown to be carcinogenic in long-term studies only when consumed as alcoholic beverage. Ethanol has been shown to be a reproductive toxin only when consumed as an alcoholic beverage.
<b>Aspiration hazard</b>	No information available.

**Numerical measures of toxicity - Product Information**

The following values are calculated based on chapter 3.1 of the GHS document .

<b>ATEmix (oral)</b>	9329 mg/kg
<b>ATEmix (dermal)</b>	13763 mg/kg

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
Sodium carbonate 497-19-8	120 h Nitzschia mg/L EC50	96h LC50: = 300 mg/L(Lepomis macrochirus) 96hLC50: 310 - 1220 mg/L(Pimephales promelas)	48h EC50: = 265 mg/L
Ethyl alcohol 64-17-5		12.0 - 16.0: 96 h Oncorhynchus mykiss mL/L LC50 static 100: 96 h Pimephales promelas mg/L LC50 static 13400 - 15100: 96 h Pimephales promelas mg/L LC50 flow-through	9268 - 14221: 48 h Daphnia magna mg/L LC50 2: 48 h Daphnia magna mg/L EC50 Static 10800: 24 h Daphnia magna mg/L EC50

**Persistence and degradability**

No information available.

**Bioaccumulation**

No information available.

**Mobility**

Chemical Name	Partition coefficient
ALCOHOLS, C10-16, ETHOXYLATED 68002-97-1	-
Sodium carbonate 497-19-8	-
Ethyl alcohol 64-17-5	-0.32

**Other adverse effects**

No information available

**13. DISPOSAL CONSIDERATIONS**

**Waste treatment**

**Waste Disposal Methods** Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Contaminated packaging** Do not re-use empty containers.

**California Hazardous Waste Codes**

Chemical Name	California Hazardous Waste Status
ALCOHOLS, C10-16, ETHOXYLATED 68002-97-1	-
Sodium carbonate 497-19-8	Corrosive
Ethyl alcohol 64-17-5	Toxic Ignitable

#### 14. TRANSPORT INFORMATION

**DOT** Not regulated

**IATA** Not regulated

**IMDG** Not regulated

#### 15. REGULATORY INFORMATION

**International Inventories**

<b>TSCA</b>	Complies
<b>DSL/NDSL</b>	Complies
<b>EINECS/ELINCS</b>	-
<b>ENCS</b>	-
<b>IECSC</b>	Complies
<b>KECL</b>	Complies
<b>PICCS</b>	-
<b>AICS</b>	Complies

**Legend:**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List  
**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances  
**ENCS** - Japan Existing and New Chemical Substances  
**IECSC** - China Inventory of Existing Chemical Substances  
**KECL** - Korean Existing and Evaluated Chemical Substances  
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances  
**AICS** - Australian Inventory of Chemical Substances

**US Federal Regulations**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

**SARA 311/312 Hazard Categories**

<b>Acute Health Hazard</b>	Yes
<b>Chronic Health Hazard</b>	No
<b>Fire Hazard</b>	No
<b>Sudden Release of Pressure Hazard</b>	No
<b>Reactive Hazard</b>	No

**Clean Water Act**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

**CERCLA**



This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

**US State Regulations**

**California Proposition 65**

This product contains the following Proposition 65 chemicals:

Chemical Name	California Prop. 65
Ethyl alcohol - 64-17-5	Carcinogen Developmental

Chronic toxicity Ethanol has been shown to be carcinogenic in long-term studies only when consumed as alcoholic beverage Ethanol has been shown to be a reproductive toxin only when consumed as an alcoholic beverage

**U.S. State Right-to-Know Regulations**

This product contains substances regulated by state right-to-know regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Ethyl alcohol 64-17-5	X	X	X
Sodium Sulfate 7757-82-6		X	X

**U.S. EPA Label information**

EPA Pesticide Registration Number Not applicable

**16. OTHER INFORMATION**

<b>NFPA</b>	Health hazard 1	Flammability 0	Instability 0	Physical and chemical hazards -
<b>HMIS</b>	Health hazard 1	Flammability 0	Physical Hazard 0	Personal protection X

Prepared By Sun Products Corporation  
Regulatory Affairs

Revision Date 22-Nov-2016

Revision Note  
No information available

**Disclaimer**

The (M)SDS is intended to provide a brief summary of our knowledge and guidance regarding the use of this material. The information contained here has been compiled from sources considered by Sun Products Corporation to be dependable and is accurate to the best of the Company's knowledge. It is not meant to be an all-inclusive document on worldwide hazard communication regulations.

This information is offered in good faith. Each user of this material needs to evaluate the conditions of use and design the appropriate protective mechanisms to prevent employee exposures, property damage or release to the environment. Sun Products Corporation assumes no responsibility for injury to the recipient of third persons, or for any damage to any property resulting from misuse of the product.

**End of Material Safety Data Sheet**