Material Safety Data Sheet

Radiator Stop-Leak – RSL/2

Section 1 – Product and Company Identification

Product Name: Radiator Stop-Leak

Product Number: RSL/2

Product Type: Radiator Additive

Supplier: Justice Brothers, Inc.
2734 Huntington Dr.
Duarte, CA 91010

EMERGENCY PHONE NUMBERS
CHEMTREC
(800) 424-9300 (24 hours)
(703) 527-3887 (outside U.S)

General Information Phone Number
(626) 359-9174 (8am-5pm, M-F)

Section 2 – Hazards Identification

Emergency Overview
green liquid; slight ammonia odor
DANGER: CONTAINS PETROLEUM DISTILLATE. HARMFUL OR FATAL IF SWALLOWED.

Potential Health Effects

Inhalation — May cause irritation of the nose and throat.

Eyes — Direct contact with this liquid may cause stinging, tearing, redness and swelling.

Skin — May cause skin irritation on prolonged or repeated contact.

Ingestion — Ingestion may cause irritation of the mouth, throat and respiratory tract leading to nausea, headache, vomiting and drowsiness.

Section 3 – Composition / Information on Ingredients

List of hazardous ingredients greater than 1.0% concentration (0.1% for carcinogens):

Ingredient Name	CAS Number
highly refined mineral oil	mixture*
dicyclohexylamine	101-83-7
boric acid	10043-35-3
alkyl ether acid phosphate	proprietary

* any of: 64741-88-4, 64741-89-5, 64741-96-4, 64741-97-5, 64742-01-4, 64742-46-7, 64742-52-5, 64742-53-6, 64742-54-7, 64742-55-8, 64742-56-9, 64742-57-0, 64742-62-7, 64742-63-8, 64742-65-0, 72623-85-9, 72623-86-0, 72623-87-1

This product is classified as hazardous under the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Section 4 – First Aid Measures

Inhalation — If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. Get medical attention.

Eyes — In case of eye contact, flush eyes with plenty of water for at least 15 minutes. Contact a physician.

Skin — Wash exposed skin with soap and water. Remove contaminated clothing. Get medical attention, if irritation develops.

Ingestion — If swallowed, do not induce vomiting. Give large amounts of water and get immediate medical attention.

Section 5 – Fire Fighting Measures

Flash Point	> 200 ºF
UEL	not determined
LEL	not determined
Extinguisher Media	dry chemical, carbon dioxide, Halon, foam, or water spray

Fire Fighting Procedures
Use appropriate extinguisher media and protective equipment. This material is water-based; it may burn but will not ignite readily.

Unusual Fire and Explosion Hazards
When heated above the flash point, this material will release flammable vapors which when exposed to an ignition source can burn in the open or be explosive in confined spaces. If container is not properly cooled, it may explode in the heat of a fire. Mists or sprays may be flammable at temperatures below the normal flash point.
Combustion may yield carbon oxides and nitrogen compounds.

Section 6 – Accidental Release Measures

Keep all sources of ignition and heat away from spill/release. Stay upwind and isolate hazard area. Wear protective equipment as conditions warrant. Prevent spilled material from entering sewers, storm drains and natural waterways. Spilled material may be absorbed into an appropriate absorbent. Notify fire authorities and appropriate agencies.

Section 7 – Handling and Storage

Handling Procedures
Wear appropriate protective equipment including respiratory protection as conditions warrant (see Section 8).

Storage Procedures
Avoid storing near incompatible materials (see Section 10).

Section 8 – Exposure Controls / Personal Protection

Exposure Limits

Ingredient Name	CAS Number	Exposure Limits
highly refined mineral oil *	mixture	OSHA PEL/TWA 5 mg/m3 ACGIH TLV/TWA 5 mg/m3 TLV/STEL 10 mg/m3
dicyclohexylamine	101-83-7	none established
boric acid	10043-35-3	none established
alkyl ether acid phosphate	proprietary	none established

* Exposure limit for oil mist.

Engineering Controls
If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits, additional ventilation or exhaust systems may be required.

Gloves
Use of gloves impermeable to the specific material handled is advised to prevent skin contact and possible irritation.

Eye Protection
Approved eye protection to safeguard against potential eye contact, irritation or injury is recommended.

Respiratory Protection
If airborne concentrations exceed established exposure limits, use a supplied air respirator. Do not use a chemical cartridge respirator.

Other Recommendations
It is suggested that a source of clean water be available in the work area for flushing eyes and skin. Impervious clothing should be worn as needed.

Section 9 – Physical and Chemical Properties

Appearance/Odor:	green liquid; slight ammonia odor
Specific Gravity:	0.92
Vapor Pressure:	12 mmHg
Vapor Density:	5 (air = 1.0)
Evaporation Rate:	< 1 (n-butyl acetate = 1)
Volatiles:	> 50%
Flash Point:	> 200 ºF
UEL:	not determined
LEL:	not determined
Boiling Point:	> 200 ºF

Section 10 – Stability and Reactivity

Stability
This product is stable under normal conditions of storage and handling.

Hazardous Polymerization
Hazardous polymerization will not occur.

Incompatibility
Avoid acids, bases, and strong oxidizers.

Hazardous Decomposition Products
Combustion may yield carbon oxides and nitrogen compounds.

Section 11 – Toxicological Information

Data is listed below for each ingredient where toxicological data is available. Please refer to Section 3 for a summary of potential hazards related to this product.

highly refined mineral oil (mixture)
This material is not listed as a carcinogen by IARC, NTP, or OSHA. No other specific toxicological data are available for this component.

dicyclohexylamine (CAS No. 101-83-7)
This material is not listed as a carcinogen by IARC, NTP, or OSHA. No other specific toxicological data are available for this component.

boric acid (CAS No. 10043-35-3)
This material is not listed as a carcinogen by IARC, NTP, or OSHA. No other specific toxicological data are available for this component.

alkyl ether acid phosphate (proprietary)
This material is not listed as a carcinogen by IARC, NTP, or OSHA.

Acute Toxicity: LD50 (rat, oral) = 4450 mg/kg

Section 12 – Ecological Information

No specific ecological data are available for the components of this product. Please refer to Section 6 for measure in case of an accidental release.

Section 13 – Disposal Considerations

Dispose of product in accordance with local, county, state and federal regulations.

Section 14 – Transport Information

THIS PRODUCT IS NOT HAZARDOUS AS DEFINED BY U.S. DOT (49 CFR 172.101)

Section 15 – Regulatory Information

Chemical Inventory
All components of this material are listed on the following chemical inventories:
TSCA (United States), DSL (Canada), EINECS/ELINCS (European Union)

EC Classification

Danger Classification


T (Toxic)


N (Dangerous for the environment)

Risk Phrases
R36/38: Irritating to eyes and skin.
R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R60: May impair fertility.

Safety Phrases
S1/2: Keep locked up and out of reach of children.
S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S29: Do not empty into drains.

S36/37: Wear suitable protective clothing and gloves.
S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S53: Avoid exposure - obtain special instructions before use.

Hazardous Substances dicyclohexylamine, alkyl ether acid phosphate, boric acid

SARA Title III (40 CFR 370)

Extreme Hazards None of the components of this product are listed on the SARA Extremely Hazardous Substances list.

Section 313 This product does not contain greater than 0.1% of any component listed under SARA Section 313.

Classification Acute Hazard: Yes
Chronic Hazard: No
Fire Hazard: No
Reactivity Hazard: No

California Proposition 65
This product does not contain any components contained on the California Proposition 65 lists.

Section 16 – Other Information

NFPA Codes **Health:** 3 **Fire:** 1 **Reactivity:** 0

HMIS Codes **Health:** 3 **Fire:** 1 **Reactivity:** 1

Revision Information This document was last reviewed January 5, 2010.
Last revision date was January 19, 2009.