

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product name RID-X® RV Toilet Treatment

CAS # Mixture

This MSDS is designed for workplace employees, emergency personnel and for other conditions and situations where there is a greater potential for large-scale or prolonged exposure, in accordance with requirements of the U.S. Government's Occupational Safety and Health Administration (OSHA).

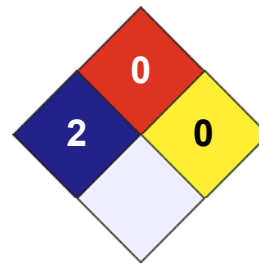
This MSDS is not applicable for consumer use of our products. For consumer use, all precautionary and first aid language is provided on the product label in accordance with the applicable government regulation.

Product Use Treatment

Distributed by Reckitt Benckiser
 Morris Corporate Center IV
 399 Interpace Parkway
 P.O. Box 225
 Parsippany, NJ 07054-0225
 In Case of Emergency: 1-800-338-6167
 Transportation Emergencies: 24 Hour Number:
 North America: CHEMTREC: 1-800-424-9300
 Outside North America: 1-703-527-3887

LEGEND	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

HEALTH	/ 2
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	B



2. Hazards Identification

Emergency overview CAUTION: May cause eye irritation. May cause mild skin irritation after prolonged contact. Inhaling mist from this product could cause irritation to the lungs and mucous membranes. Ingestion could cause irritation to the mouth and throat. Individuals having known allergies, as well as those with respiratory disease or disorders should avoid contact with this product.

KEEP OUT OF REACH OF CHILDREN.

Potential short term health effects

Routes of exposure Eye, Skin contact, Inhalation, Ingestion.
Eyes May cause eye irritation.
Skin May cause mild skin irritation after prolonged contact.
Inhalation Inhaling mist from this product could cause irritation to the lungs and mucous membranes.
Ingestion May be harmful if swallowed. Ingestion could cause irritation of the mouth and throat.

Target organs Eyes. Respiratory system. Skin.

Chronic effects The finished product is not expected to have chronic health effects.

Signs and symptoms Symptoms may include redness, edema, drying, defatting and cracking of the skin. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

OSHA regulatory status This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

3. Composition/Information on Ingredients

Components	CAS #	Percent
Glycerol	56-81-5	20 - 40
a-Amylase (EC# 3.2.1.1)	9000-90-2	2.5 - 10
Alcohols, C9-11, ethoxylated	68439-46-3	2.5 - 10
Bacteria, complex with amylase and proteinase	68920-42-3	2.5 - 10
Cellulase (ID# 3.2.1.4)	9012-54-8	2.5 - 10
Subtilisin carlsburg	9014-01-1	2.5 - 10
Triacylglycerol Lipase (EC# 3.1.1.3)	9001-62-1	2.5 - 10
Fragrance	Proprietary	0.5 - 1.5

4. First Aid Measures

First aid procedures

Eye contact	If in eyes, rinse eyes with water for fifteen minutes, if irritation persists, see a physician. Remove contact lenses and continue rinsing.
Skin contact	If on skin, wash the product off the skin with soap and water. If irritation develops, seek the care of a physician.
Inhalation	If inhaled, move to fresh air and avoid further contact with product. If breathing or skin problems develop, see the care of a physician.
Ingestion	If ingested, drink water to dilute and call a physician. Induce vomiting only if advised by a physician.

Notes to physician

Treat patient symptomatically.

General advice

If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Avoid contact with eyes and skin. Keep out of reach of children.

5. Fire Fighting Measures

Flammable properties	Not flammable by OSHA criteria.
Extinguishing media	
Suitable extinguishing media	Water spray. Carbon dioxide. Dry chemical.
Unsuitable extinguishing media	Not available
Protection of firefighters	
Specific hazards arising from the chemical	Not available
Protective equipment and precautions for firefighters	Firefighters should wear full protective clothing including self contained breathing apparatus.
Hazardous combustion products	May include and are not limited to: Oxides of carbon.
Explosion data	
Sensitivity to mechanical impact	Not available.
Sensitivity to static discharge	Not available.

6. Accidental Release Measures

Personal precautions	Ensure adequate ventilation. Use personal protective equipment. Do not touch or walk through spilled PRODUCT CONCENTRATE. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
Environmental precautions	Do not discharge into lakes, streams, ponds or public waters. Advise authorities if product has penetrated drains, sewers or water pipes.
Methods for containment	Prevent entry into waterways, sewers, basements or confined areas.

Methods for cleaning up

Before attempting clean up, refer to hazard data given above. Small spills may be absorbed with non-reactive absorbent and placed in suitable, covered, labelled containers. Prevent large spills from entering sewers or waterways. Contact emergency services and supplier for advice.

7. Handling and Storage

Handling

Ensure adequate ventilation.
 Use good industrial hygiene practices in handling this material.
 When using do not eat or drink.
 Wash hands before breaks and immediately after handling the product.
 Do not get this material in your eyes, on your skin, or on your clothing.
 Do not ingest.
 Avoid breathing mists or vapors.

Storage

Keep out of reach of children.
 Store in a closed container away from incompatible materials.
 Do not store in direct sunlight.
 Store away from heat.
 Do not contaminate water, food or feed by storage or disposal.
 Store in a cool dry place inaccessible to children and pets.

8. Exposure Controls/Personal Protection

Occupational exposure limits**US. ACGIH Threshold Limit Values**

Components	Type	Value
Subtilisin carlsburg (CAS 9014-01-1)	Ceiling	0.00006 mg/m ³

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Glycerol (CAS 56-81-5)	PEL	5 mg/m ³	Respirable fraction.
		15 mg/m ³	Total dust.

Exposure limits

Chemicals listed in section 3 that are not listed here do not have established limit values for ACGIH or OSHA PEL.

Engineering controls

General ventilation normally adequate.

Personal protective equipment

Consult the product label for special protection or precautions that have been identified for using this product under directed consumer use conditions. The following recommendations are given for workplace employees, emergency personnel and for other conditions and situations where there is a greater potential for large-scale or prolonged exposure.

Eye / face protection

Avoid contact with eyes. Wear safety glasses with side shields. Emergency responders should wear full eye and face protection.

Hand protection

Avoid contact with the skin. Wear impervious gloves where the potential for contact with the liquid is possible. Emergency responders should wear impermeable gloves.

Skin and body protection

long sleeved clothing
 Emergency responders should wear impermeable clothing and footwear when responding to a situation where contact with the liquid is possible.
 Follow label directions carefully.

Respiratory protection

None required where adequate ventilation conditions exist. Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.
 Emergency responders should wear self-contained breathing apparatus (SCBA) to avoid inhalation of vapours generated by this product during a spill or other clean-up operations.

General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. Washing with soap and water after use is recommended as good hygienic practice to prevent possible eye irritation from hand contact.

9. Physical and Chemical Properties

Appearance	Liquid
Color	Blue
Form	Liquid
Odor	Characteristic
Odor threshold	Not available.

Physical state	Liquid.
pH	6.5 - 8
Freezing point	Not available.
Boiling point	Not available.
Pour point	Not available.
Evaporation rate	Not available
Flash point	> 199.9 °F (> 93.3 °C)
Auto-ignition temperature	Not available.
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Specific gravity	1 - 1.1
Partition coefficient (n-octanol/water)	Not available.
Solubility (water)	Complete
Relative density	Not available.
Viscosity	Not available.
VOC	Not available
Percent volatile	Not available

10. Stability and Reactivity

Reactivity	This product may react with oxidizing agents.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Chemical stability	Stable under recommended storage conditions.
Conditions to avoid	Do not mix with other chemicals. Keep from freezing. Excessive heat and moisture. DO NOT MIX WITH BLEACH or use in conjunction with other household products.
Incompatible materials	Acids. Oxidizers.
Hazardous decomposition products	May include and are not limited to: Oxides of carbon.

11. Toxicological Information

Toxicological data

Components	Species	Test Results
a-Amylase (EC# 3.2.1.1) (CAS 9000-90-2)		
Acute		
<i>Oral</i>		
LD50	Rat	>= 7500 mg/kg
LC50		
Not available.		
Alcohols, C9-11, ethoxylated (CAS 68439-46-3)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	2000 mg/kg
	Rat	2000 mg/kg
<i>Inhalation</i>		
LC50	Rat 5	mg/l/4h

Components	Species	Test Results
Oral LD50	Rat	1200 mg/kg
Bacteria, complex with amylase and proteinase (CAS 68920-42-3)		
LC50 Not available.		
LD50 Not available.		
Cellulase (ID# 3.2.1.4) (CAS 9012-54-8)		
Acute		
Oral LD50	Mouse	30900 mg/kg
LC50 Not available.		
Subtilisin carlsburg (CAS 9014-01-1)		
LC50 Not available.		
LD50 Not available.		
Triacylglycerol Lipase (EC# 3.1.1.3) (CAS 9001-62-1)		
Acute		
Oral LD50	Rat	45500 mg/kg
LC50 Not available.		

Effects of acute exposure

Eye contact	May cause eye irritation.
Skin contact	May cause mild skin irritation after prolonged contact.
Inhalation	Inhaling mist from this product could cause irritation to the lungs and mucous membranes.
Ingestion	May be harmful if swallowed. Ingestion could cause irritation of the mouth and throat.
Sensitization	May cause sensitization of susceptible persons.
Chronic effects	The finished product is not expected to have chronic health effects.
Carcinogenicity	The finished product is not expected to have chronic health effects.
Mutagenicity	The finished product is not expected to have chronic health effects.
Reproductive effects	The finished product is not expected to have chronic health effects.
Teratogenicity	The finished product is not expected to have chronic health effects.
Name of Toxicologically Synergistic Products	Not available.

12. Ecological Information

Ecotoxicity	See below		
Ecotoxicological data			
Components	Species		Test Results
Alcohols, C9-11, ethoxylated (CAS 68439-46-3)			
Other	Rainbow Trout		70.7 mg/l, 96 Hours
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	2.9 - 8.5 mg/l, 48 hours

Components		Species	Test Results
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>)	6 - 12 mg/l, 96 hours
Glycerol (CAS 56-81-5)			
Aquatic			
Fish LC5	0	Rainbow trout,donaldson trout (<i>Oncorhynchus mykiss</i>)	51000 - 57000 mg/l, 96 hours
Persistence and degradability	Not available.		
Bioaccumulation / Accumulation	Not available.		
Mobility in environmental media	Not available.		
Environmental effects	Not available.		
Aquatic toxicity	Not available.		
Partition coefficient			
Glycerol		-1.76	
Chemical fate information	Not available.		

13. Disposal Considerations

Disposal instructions	Small quantities of waste liquid may be discharged into a sanitary sewer. Discard any absorbed material in trash collection. Rinse empty container thoroughly and discard in trash or recycle. Large Quantities: Wearing appropriate personal protective equipment, collect and store in an appropriate container for disposal according to local, state, provincial and federal regulations. Avoid creating a mist during the clean-up operations. do not use a high pressure washer for clean-up of spilled or waste materials.
Waste from residues / unused products	Not available
Contaminated packaging	Not available

14. Transport Information

U.S. Department of Transportation (DOT)	Not regulated as dangerous goods.
Transportation of Dangerous Goods (TDG - Canada)	Not regulated as dangerous goods.
IATA/ICAO (Air)	Not regulated as dangerous goods.
IMDG (Marine Transport)	Not regulated as dangerous goods.

15. Regulatory Information

Occupational Safety and Health Administration (OSHA)	
29 CFR 1910.1200 hazardous chemical	Yes
US federal regulations	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. Product Registration: Product is compliant with CPSC regulatory guidelines; a specific registration is not required for this product.
TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)	Not regulated.
CERCLA Hazardous Substance List (40 CFR 302.4)	Not listed.
US CAA Section 111 Volatile Organic Compounds: Listed substance	
Glycerol (CAS 56-81-5)	Listed.
Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)	
	Not regulated.

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

CERCLA (Superfund) reportable quantity

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

State regulations This product is not subject to warning labeling under the California Proposition 65 regulation.

US - California Hazardous Substances (Director's): Listed substance

Subtilisin carlsburg (CAS 9014-01-1) Listed.

US - Minnesota Haz Subs: Listed substance

Glycerol (CAS 56-81-5) Listed.

US - New Jersey RTK - Substances: Listed substance

Glycerol (CAS 56-81-5) Listed.

US - Texas Effects Screening Levels: Listed substance

Alcohols, C9-11, ethoxylated (CAS 68439-46-3) Listed.

Glycerol (CAS 56-81-5) Listed.

Subtilisin carlsburg (CAS 9014-01-1) Listed.

US. Massachusetts RTK - Substance List

Glycerol (CAS 56-81-5) Listed.

US. Pennsylvania RTK - Hazardous Substances

Glycerol (CAS 56-81-5) Listed.

US. Rhode Island RTK

Not regulated.

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. Other Information

Disclaimer This product should only be used as directed on the label and for the purpose intended. To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Further information RID-X® RV Toilet Treatment 24 fl oz – 8123640V1.0
RID-X® RV Toilet Treatment 48 fl oz – 8123640V1.0

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Prepared by Reckitt Benckiser Regulatory Department Phone: 800-333-3899

Other information For an updated MSDS, please contact the supplier/manufacturer listed on the first page of the document.

This MSDS conforms to the ANSI Z400.1/Z129.1-2010 Standard.