

Material Safety Data Sheet

Material Name: Rainbow® Floor Cleaner Concentrate

MSDSID: REX-005

*** Section 1 - Chemical Product and Company Identification ***

Manufacturer Information

REXAIR LLC
50 W. Big Beaver Rd., Suite 350
Troy, MI 48084

Phone: (248) 643-7222

Emergency # 1 (800) 255 3924 CHEM-TEL, INC.

General Comments

NOTE: Emergency telephone numbers are to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure, or accident involving chemicals. All non-emergency questions should be directed to customer service.

*** Section 2 - Composition / Information on Ingredients ***

CAS #	Substance	Percent
7732-18-5	Water	70-90
61791-08-0	Fatty acids, coco, reaction products with ethanolamine, ethoxylated	7-13
111-76-2	2-Butoxyethanol (EGBE)	1-5
68081-81-2	Benzenesulfonic acid, C10-16-alkyl derivatives, sodium salts	1-2
111-42-2	Diethanolamine	1-5

Component Information/Information on Non-Hazardous Components

This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).

This product is a controlled product under the Canadian Controlled Products Act.

*** Section 3 - Hazards Identification ***

Emergency Overview

Product is a non-flammable orange liquid with a characteristic odor. Irritating and toxic fumes and gases may be released upon thermal processing or during combustion. This product is irritating to the respiratory system and skin. This product may be severely irritating to the eyes. This product may be harmful if it is swallowed. Product contains components that may cause skin sensitization. Ingestion or inhalation of product may result in central nervous system effects.

Potential Health Effects: Eyes

Contact with the eyes may cause moderate to severe eye injury. Eye contact may result in corneal injury. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

Potential Health Effects: Skin

This product may cause irritation to the skin. Contact with liquid may produce severe skin irritation including redness and inflammation. Product contains components which may be absorbed through the skin. Product contains a component which may cause skin sensitization.

Potential Health Effects: Ingestion

This product may be harmful if it is swallowed. Ingestion of this product may result in central nervous system effects including headache, sleepiness, dizziness, slurred speech and blurred vision. Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Potential Health Effects: Inhalation

This product is irritating to the respiratory system. Excessive inhalation of this material causes headache, dizziness, nausea and incoordination.

HMIS Ratings: Health: 2 Fire: 1 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

*** Section 4 - First Aid Measures ***

First Aid: Eyes

Immediately flush eyes with water for at least 15 minutes, while holding eyelids open. Seek medical attention at once.

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First Aid: Skin

In case of contact, immediately remove contaminated clothing and flush skin with copious amounts of water. Wash contaminated clothing before reuse. Get medical attention or advice.

First Aid: Ingestion

If the material is swallowed, get immediate medical attention or advice -- Do not induce vomiting. Never give anything by mouth to a victim who is unconscious or is having convulsions.

First Aid: Inhalation

Move person to non-contaminated air. If the affected person is not breathing, apply artificial respiration. Seek medical attention.

First Aid: Notes to Physician

Provide general supportive measures and treat symptomatically.

*** Section 5 - Fire Fighting Measures ***

Flash Point: >200°F (>93.3°C)

Upper Flammable Limit (UFL): Not available

Auto Ignition: Not determined

Rate of Burning: Not determined

General Fire Hazards

Negligible fire hazard.

Hazardous Combustion Products

Upon decomposition, this product emits carbon monoxide, carbon dioxide, low molecular weight hydrocarbons, oxides of sulfur, oxides of nitrogen and/or hydrogen sulfide.

Extinguishing Media

Dry chemical, foam, carbon dioxide, water fog. Use water to cool fire-exposed containers and to protect personnel.

Fire Fighting Equipment/Instructions

Firefighters should wear full protective clothing including self contained breathing apparatus.

NFPA Ratings: Health: 2 Fire: 1 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

*** Section 6 - Accidental Release Measures ***

Containment Procedures

Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Block any potential routes to water systems.

Clean-Up Procedures

Wear appropriate protective equipment and clothing during clean-up. Ventilate the contaminated area. Absorb spill with inert material. Shovel material into appropriate container for disposal.

Evacuation Procedures

Isolate area. Keep unnecessary personnel away.

Special Procedures

Surfaces may become slippery after spillage. Have emergency equipment readily available.

*** Section 7 - Handling and Storage ***

Handling Procedures

Avoid getting this material into contact with your skin and eyes. Avoid breathing vapors or mists of this product. Use this product with adequate ventilation. Wash thoroughly after handling.

Storage Procedures

Keep the container tightly closed and in a cool, well-ventilated place. Store away from incompatible materials. Prevent product from freezing. All Rexair liquids are valid 6 years after the date of manufacturing.

*** Section 8 - Exposure Controls / Personal Protection ***

Exposure Guidelines

A: General Product Information

Follow all applicable exposure limits.

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B: Component Exposure Limits

2-Butoxyethanol (EGBE) (111-76-2)

ACGIH: 20 ppm TWA
OSHA: 25 ppm TWA; 120 mg/m³ TWA
Prevent or reduce skin absorption
NIOSH: 5 ppm TWA; 24 mg/m³ TWA
Potential for dermal absorption

Diethanolamine (111-42-2)

ACGIH: 2 mg/m³ TWA
Skin - potential significant contribution to overall exposure by the cutaneous route
OSHA: 3 ppm TWA; 15 mg/m³ TWA
NIOSH: 3 ppm TWA; 15 mg/m³ TWA

Engineering Controls

Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment: Eyes/Face

Wear chemical goggles; face shield (if splashing is possible).

Personal Protective Equipment: Skin

Use impervious gloves. Work clothing sufficient to prevent all skin contact should be worn, such as coveralls and long sleeves.

Personal Protective Equipment: Respiratory

If airborne concentrations are above the applicable exposure limits, use NIOSH approved respiratory protection. Respirators should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134) or under applicable Canadian standards and the Canadian Standards Association standard for the "Selection, care, and use of respirators" (CSA Standard Z94.4-02). A written respiratory protection program, including provisions for medical certification, training, fit testing, exposure assessments, maintenance, inspection, cleaning, and convenient, sanitary storage must be implemented.

Personal Protective Equipment: General

Eye wash fountain and emergency showers are recommended. Use good industrial hygiene practices in handling this material.

*** Section 9 - Physical & Chemical Properties ***

Appearance:	Orange	Odor:	Slightly citrus
Physical State:	Liquid	pH:	9.64
Vapor Pressure:	Approximately 17.0 mm Hg at 20°C	Vapor Density:	Estimated >1 (air = 1)
Boiling Point:	201.2°F (94°C) (Barometric pr. = 30.19 " Hg)	Melting Point:	Not available
Solubility (H₂O):	Complete	Specific Gravity:	1.009
Freezing Point:	32.0°F (0.0°C) (Barometric pr. = 30.19 " Hg)	Softening Point:	Not applicable
Evaporation Rate:	Estimated slower than Ethyl Ether	Viscosity:	8.13 cSt
Bulk Density:	1.005 g/mL	Percent Volatile:	Approx. 79%

*** Section 10 - Chemical Stability & Reactivity Information ***

Chemical Stability

Stable under normal conditions.

Chemical Stability: Conditions to Avoid

No information available for the product.

Incompatibility

This product may react with strong acids or oxidizing agents.

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Hazardous Decomposition

Upon decomposition, this product emits carbon monoxide, carbon dioxide, low molecular weight hydrocarbons, oxides of sulfur, oxides of nitrogen and/or hydrogen sulfide.

Hazardous Polymerization

Will not occur.

*** Section 11 - Toxicological Information ***

Acute and Chronic Toxicity

A: General Product Information

No information available for the product. This product may be harmful if it is swallowed. This product is irritating to the eyes, respiratory system and skin. Excessive inhalation of this material may cause central nervous system depression. Symptoms include headache, dizziness, nausea and incoordination. Product contains components which may be absorbed through the skin. Product contains component which may cause skin sensitization.

B: Component Analysis - LD50/LC50

Water (7732-18-5)

Oral LD50 Rat: >90 mL/kg

2-Butoxyethanol (EGBE) (111-76-2)

Inhalation LC50 Rat: 2.21 mg/L/4H; Inhalation LC50 Rat: 450 ppm/4H; Oral LD50 Rat: 470 mg/kg; Dermal LD50 Rat: 2270 mg/kg; Dermal LD50 Rabbit: 220 mg/kg

Diethanolamine (111-42-2)

Oral LD50 Rat: 620 µL/kg; Dermal LD50 Rabbit: 7640 µL/kg

Carcinogenicity

A: General Product Information

No carcinogenicity data available for this product.

B: Component Carcinogenicity

2-Butoxyethanol (EGBE) (111-76-2)

ACGIH: A3 - Confirmed animal carcinogen with unknown relevance to humans

IARC: Monograph 88 in preparation (Group 3 (not classifiable))

Diethanolamine (111-42-2)

IARC: Monograph 77 [2000] (Group 3 (not classifiable))

*** Section 12 - Ecological Information ***

Ecotoxicity

A: General Product Information

No information available for the product. Components of this product are hazardous to aquatic life.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

2-Butoxyethanol (EGBE) (111-76-2)

Test & Species	Data	Conditions
96 Hr LC50 Lepomis macrochirus	1490 mg/L	static
24 Hr EC50 water flea	1720 mg/L	
24 Hr LC50 Daphnia magna	1698-1940 mg/L	

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Diethanolamine (111-42-2)

Test & Species	Data	Conditions
96 Hr LC50 Pimephales promelas	4710 mg/L	flow-through
96 Hr LC50 Pimephales promelas	1460 mg/L	static
96 Hr LC50 Lepomis macrochirus	600-1000 mg/L	static
72 Hr EC50 Scenedesmus subspicatus	7.8 mg/L	
96 Hr EC50 Selenastrum capricornutum	2.1-2.3 mg/L	
5 min EC50 Photobacterium phosphoreum	73 mg/L	15 °C
16 Hr EC50 Pseudomonas putida	>16 mg/L	
16 Hr EC50 Pseudomonas fluorescens	>16 mg/L	
48 Hr EC50 Daphnia magna	55 mg/L	

Environmental Fate

No information available for the product.

*** Section 13 - Disposal Considerations ***

US EPA Waste Number & Descriptions

A: General Product Information

Material, if discarded, is not expected to be a characteristic hazardous waste under RCRA. Wastes must be tested using methods described in 40 CFR Part 261 to determine if it meets applicable definitions of hazardous wastes.

B: Component Waste Numbers

No EPA Waste Numbers are applicable for this product's components.

Disposal Instructions

Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.

*** Section 14 - Transportation Information ***

US DOT Information

Shipping Name: Not regulated for transportation

Additional Info.: Note: This product is being shipped in non-bulk packaging. However, this product contains: Diethanolamine, which has a Reportable Quantity (RQ) of 100 lbs (45.4 kg). If the above quantities are exceeded in a single package, then this product should be reclassified as:

Shipping Name: Environmentally hazardous substances, liquid, n.o.s. (Diethanolamine)

Classification: 9.2

UN # : 3082

Packing Group: III

Required Label(s): Class 9

TDG Information

Shipping Name: Not regulated for transportation.

*** Section 15 - Regulatory Information ***

US Federal Regulations

A: General Product Information

All components are on the U.S. EPA TSCA Inventory List.

B: Component Analysis

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4).

Diethanolamine (111-42-2)

SARA 313: 1.0 % de minimis concentration

CERCLA: 100 lb final RQ; 45.4 kg final RQ

SARA 311/312 Acute Health: Yes **Chronic Health:** No **Fire:** No **Pressure:** No **Reactive:** No

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State Regulations

A: General Product Information

Other state regulations may apply. Check individual state requirements.

B: Component Analysis - State

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA	RI
2-Butoxyethanol (EGBE)	111-76-2	Yes	Yes	Yes	Yes	Yes	Yes
Diethanolamine	111-42-2	Yes	Yes	Yes	Yes	Yes	Yes

Canadian WHMIS Information

A: General Product Information

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

This product is a controlled product under the Canadian Workplace Hazardous Materials Information System.

B: Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Substance	CAS #	Minimum Concentration
2-Butoxyethanol (EGBE)	111-76-2	1 %
Diethanolamine	111-42-2	1 %

WHMIS Classification: D2B

Additional Regulatory Information

A: General Product Information

No additional information available.

B: Component Analysis - Inventory

Substance	CAS #	TSCA	CAN	EEC	ELINCS
Water	7732-18-5	Yes	DSL	EINECS	No
Fatty acids, coco, reaction products with ethanolamine, ethoxylated	61791-08-0	Yes	DSL	No	No
2-Butoxyethanol (EGBE)	111-76-2	Yes	DSL	EINECS	No
Benzenesulfonic acid, C10-16-alkyl derivatives, sodium salts	68081-81-2	Yes	DSL	EINECS	No
Diethanolamine	111-42-2	Yes	DSL	EINECS	No

*** Section 16 - Other Information ***

Other Information

No additional information available.

MSDS History

MSDS Revision Update: 07/20/2005

MSDS Revision Update: 10/05/2005

MSDS Revision Update: 04/03/2006

MSDS Revision Update: 11/22/2006

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Key/Legend

ACGIH = American Conference of Governmental Industrial Hygienists; CAS = Chemical Abstracts Service; CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act; CFR = Code of Federal Regulations; CPR = Controlled Products Regulations; DOT = Department of Transportation; DSL = Domestic Substances List; EINECS = European Inventory of Existing Commercial Chemical Substances; EPA = Environmental Protection Agency; IARC = International Agency for Research on Cancer; IATA = International Air Transport Association; mg/Kg = milligrams per Kilogram; mg/L = milligrams per Liter; mg/m³ = milligrams per Cubic Meter; MSHA = Mine Safety and Health Administration; NA = Not Applicable or Not Available; NIOSH = National Institute for Occupational Safety and Health; NJTSR = New Jersey Trade Secret Registry; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration; SARA = Superfund Amendments and Reauthorization Act; STEL = Short Term Exposure Limit; TDG = Transport Dangerous Goods; TSCA = Toxic Substances Control Act; WHMIS = Workplace Hazardous Materials Information System.

Contact: Bruce Shafer, V.P. of Manufacturing

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This is the end of MSDS # REX-005