HR-2800
Safety Data Sheet
Revision date: April 1, 2018
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name : HR-2800
Product form : Mixture
Product code : 30-00003

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Haze Remover

1.3. Details of the supplier of the safety data sheet

RhinoTech, Inc. P.O.
Box 5426
Sarasota, FL 34277 651.686.5027

1.4. Emergency telephone number

ChemTel, Inc. 800-255-3924, International 813-248-0585

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture Classification (GHS-US)

Hazard Code	Hazard Class	Hazard Category
H302	Acute toxicity, oral	4
H312	Acute toxicity, dermal	4
H314	Skin corrosion/irritation	1B
H331	Acute toxicity, inhalation	3
H335	Specific target organ toxicity, single exposure (Respiratory Tract Irritation)	3
H351	Carcinogenicity	2
H370	Specific target organ toxicity, single exposure	1
H373	Specific target organ toxicity, repeated exposure	2

HANDLE IN ACCORDANCE WITH GOOD INDUSTRIAL HYGIENE AND SAFETY PRACTICES

2.2. Label elements GHS-US labeling

Hazard pictograms (GHS-US

Signal Word (GHS-US): **Danger**

Hazard Statements (GHS-US):

H302: Harmful if swallowed
H312: Harmful in contact with skin
H314: Causes severe skin burns and eye damage

H331: Toxic if inhaled
H335: May cause repertory irritation
H351: Suspected of causing cancer
H370: Causes damage to organs
H373: May cause damage to organs

Precautionary statements (GHS-US):

P201: Obtain special instructions before use
P202: Do not handle until all safety precautions have been read and understood
P260: Do not breathe dust/fumes/gas/mist/vapors/spray

P264: Wash thoroughly after handling
P270:Do not eat, drink or smoke when using this product
P271: Use only outdoors or in a well-ventilated area
P280: Wear protective gloves/protective clothing/eye protection/face protection
P310: Immediately call a POISON CENTER or doctor/physician
P321: Specific treatment (see SECTION 4)
P322: Specific measures (see SECTION 4)
P330: Rinse mouth
P363: Wash contaminated clothing before reuse
P301+312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
P301+330+331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
P302+352: IF ON SKIN: Wash with soap and water
P303+361+353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing
P307+311: IF exposed: Call a POISON CENTER or doctor/physician
P403+233: Store in a well ventilated place. Keep container tightly closed
P405: Store locked up
P501: Dispose of contents/container in accordance with local, state and federal authorities.

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	CAS #	%
Glycol Ether EPH -Ethylene glycol monophenyl ether - 2-Phenoxyethanol	122-99-6	25 - 35
Furfuryl Alcohol	98-00-0	20 - 25
Sodium Hydroxide	1310-73-2	10 - 20
b-Alanine, N-(2-carboxyethyl)-N-[3-(ecyloxy)propyl]-, monosodium salt	64972-19-6	1 - 5

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : IF INHALED: Assure fresh air breathing. Immediately call a POISON CENTER or doctor/physician.

First-aid measures after skin contact : IF ON SKIN: Immediately rinse with plenty of water (for at least 15 minutes). Get medical advice/attention.

First-aid measures after eye contact : IF IN EYES: Rinse immediately and thoroughly, pulling the eyelids well away from the eye (15 minutes minimum). Get immediate medical attention.

First-aid measures after ingestion : IF SWALLOWED: Rinse mouth, Do NOT induce vomiting. Dilute stomach contents by drinking water. If vomiting occurs spontaneously, keep head below hips to prevent breathing vomit into lungs. Call physician immediately. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries : Harmful if swallowed or if inhaled. Causes severe skin burns and eye damage. Suspected of causing cancer (via inhalation). May cause respiratory irritation. Causes damage to organs (lungs/respiratory system) through prolonged or repeated exposure (via inhalation).

Symptoms/injuries after inhalation : Excessive exposure to vapor or mist may have toxic effects. May cause headache, nausea and irritation of respiratory tract. Vapor or mist can irritate the respiratory tract (nose, throat and lungs) and mucous membranes. Inhalation may produce severe bronchitis and spasms, coughing and chest pains. May affect brain, sense organs, blood, behavior/central nervous system causing ataxia, excitement, headache, dizziness, weakness, drowsiness, unconsciousness and gastrointestinal tract (nausea, vomiting). Effects of inhalation may be delayed.

Symptoms/injuries after skin contact : Highly corrosive to skin. Dermally toxic. May be absorbed through skin and produce systemic effects. May be harmful of absorbed through skin.

Symptoms/injuries after eye contact : Causes serious eye burns.

Symptoms/injuries after ingestion : Severe irritation or burns to the mouth, throat, esophagus, and stomach. Orally Toxic.

Chronic symptoms : Prolonged and frequent exposure through inhalation may cause cancer.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Alcohol-resistant foam. Dry powder. Carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Fire hazard : No Data. Flash point expected to be > 200 F based on ingredient data.

Explosion hazard : Product is not explosive.

Reactivity : No dangerous reactions known under normal conditions of use.

5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Do not dispose of fire-fighting water in the environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

ipment and emergency procedures

6.1. Personal precautions, protective equ : Evacuate area. Keep upwind. Ventilate area. Spill should be handled by trained clean-up crews properly equipped with respiratory equipment and full chemical protective gear (see Section 8).

General measures

6.1.1. For non-emergency personnel

Protective equipment : Wear Protective equipment as described in Section 8.

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Wear suitable protective clothing, gloves and eye or face protection. Approved supplied-air respirator, in case of emergency.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

6.3. Methods and material for containmet and cleaning up

For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Place in a suitable container for disposal in accordance with the waste regulations (see Section 13).

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Do not handle until all safety precautions have been read and understood. Wear proper safety equipment including chemically resistant gloves and safety glasses or goggles. Use with adequate ventilation. Wash thoroughly after handling. Do not get in eyes or on skin. Do not breathe mist or vapor. Do not swallow.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : heat sources. Keep container tightly closed. Store between 50 F & 100 F. Keep separate from incompatible materials.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No OSHA and ACGIH PEL's or TLV's for the listed ingredients of this product unless stated below:

Glycol Ether EPH -Ethylene glycol monophenyl ether, CAS #122-99-6			
OSHA PEL (TWA) ppm - if units not stated	OSHA PEL (STEL) ppm - if units not stated	OSHA PEL (Ceiling) ppm - if units not stated	ACGIH-TLV
25 ppm SKIN	Not Established	Not Established	Not Established
Furfuryl Alcohol, CAS #98-00-0			
OSHA PEL (TWA) ppm - if units not stated	OSHA PEL (STEL) ppm - if units not stated	OSHA PEL (Ceiling) ppm - if units not stated	ACGIH-TLV
10 ppm	15 ppm	NA	10 ppm
Sodium Hydroxide, CAS# 1310-73-2			
OSHA PEL (TWA) ppm - if units not stated	OSHA PEL (STEL) ppm - if units not stated	OSHA PEL (Ceiling) ppm - if units not stated	ACGIH-TLV
2 mg/m3	NA	NA	2 mg/m3

8.2. Exposure controls

Personal protective equipment : Gloves. Protective goggles. Face shield. Protective clothing. Respiratory protection of the dependent type.

Hand protection : Protective gloves made of chemically resistent material.

Eye protection : Eye protection, including both chemical splash goggles and face shield, must be worn when possibility exists for eye contact due to spraying liquid or airborne particles.

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : An approved organic vapor respirator/supplied air or self-contained breathing apparatus must be used when vapor concentration exceeds applicable exposure limits.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Appearance	:	Clear.
Color	:	Brown.
Odor	:	Characteristic.
Odor Threshold	:	No data available
pH	:	14
Relative evaporation rate (butyl acetate=1)	:	No data available
Melting point	:	No data available
Freezing point	:	No data available
Boiling point	:	> 100 °C (>212 °F)
Flash point	:	> 93 °C (>200 °F)
Self ignition temperature	:	No data available
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	No data available
Vapor pressure	:	No data available
Relative vapor density at 20 °C	:	No data available
Relative density	:	1.25
Solubility	:	Water: Complete
Log Pow	:	No data available
Log Kow	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	No data available
Explosive limits	:	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Contact with reactive metals (e.g. aluminum) may result in the generation of hydrogen gas.

10.2. Chemical stability

Stable under recommended handling and storage conditions (see section 7).

10.3. Possibility of hazardous reactions

Corrosive in contact with metals. Contact with metallic substances may release flammable hydrogen gas. Contact with strong acids can create excess heat and cause spattering.

10.4. Conditions to avoid

Sparks. Heat. Open flame. Contact with acids can cause violent eruptions and/or explosions.

10.5. Incompatible materials

Avoid contact with : Tin. Aluminum. Lead. Zinc. Strong oxidizing agents, strong acids, strong bases and metals.

10.6. Hazardous decomposition products

Thermal decomposition generates : Hydrogen Chloride. Carbon oxides (CO, CO2). Nitrogen oxides. Hydrocarbons. Aldehydes. Ketones. Organic acids.

Other decomposition products : No data available.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Oral LD50: 396 mg/kg (rat) Calculated
Dermal LD50: > 1000 mg/kg (rabbit) Calculated
Inhalation LC50 (4 HR - OSHA) : 3.71 mg/l (Vapors-rat) Calculated
Inhalation LC50 (1 HR - DOT) : 9,201 ml/m3 (Vapors-rat) Calculated

Glycol Ether EPH -Ethylene glycol monophenyl ether -2-Phenoxyethanol, CAS #122-99-6		
Oral LD50 rat	Dermal LD50 rabbit	Inhalation LC50
1840 mg/kg	2214 mg/kg	NA
Furfuryl Alcohol, CAS #98-00-0		
Oral LD50 rat	Dermal LD50 rabbit	Inhalation LC50
177 mg/kg	400 mg/kg	0.82 - 2.07 mg/l for Vapor / 233 ppm gas
Sodium Hydroxide, CAS# 1310-73-2		
Oral LD50 rat	Dermal LD50 rabbit	Inhalation LC50
400 mg/kg rabbit	1350 mg/kg	Not Established
b-Alanine, N-(2-carboxyethyl)-N-[3-(ecyloxy)propyl]-, monosodium salt, CAS# 64972-19-6		
Oral LD50 rat	Dermal LD50 rabbit	Inhalation LC50
>= 7,200 mg/kg	> 2,000 mg/kg	NA

TOXIC NOTE: Not DOT Toxic per 49 CFR 173.133(2)(i) as product has a calculated LC50 > 5,000 mL/m3 (vapors). However product is calculated to be a GHS inhalation hazard (H331 CAT 3 - vapors) and carries the OSHA skull and crossbones pictogram.

Skin corrosion/irritation : Causes severe skin burns and eye damage. Serious eye damage/irritation : Causes severe skin burns and eye damage.

Respiratory or skin sensitization : Not classified Germ cell mutagenicity : Not classified

Carcinogenicity : Suspected of causing cancer (Inhalation). Furfuryl Alcohol CAS#98-00-0 is Not listed in NTP however: NTP Draft Technical Report TR-482 (2-year inhalation studies rats and mice). Some evidence of carcinogenic activity in male rats, nasal neoplasms; equivocal evidence of carcinogenic activity in female rats, nasal and kidney neoplasms. Some evidence of carcinogenic activity in male mice, kidney neoplasms. No evidence of carcinogenic activity in female mice.

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : May cause respiratory irritation.

Specific target organ toxicity (repeated prolonged or repeated exposure) : May cause damage to organs (lung/respiratory system, central nervous system) through exposure (Inhalation).

Aspiration hazard : Not classified
Symptoms/injuries after inhalation : See Section 4. Symptoms/injuries after skin contact : See Section 4. Symptoms/injuries after eye contact : See Section 4. Symptoms/injuries after ingestion : See Section 4.
Chronic symptoms : See Section 4.

SECTION 12: Ecological information

12.1. Toxicity
No additional information available

12.2. Persistence and degradability No additional information available

12.3. Bioaccumulative potential No additional information available

12.4. Mobility in soil
No additional information available

12.5. Other adverse effects
No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Waste treatment methods : Do not discharge to public wastewater systems without permit of pollution control authorities. No discharge to surface waters is allowed without an NPDES permit.
Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Do not allow the product to be released into the environment.

SECTION 14: Transport information

14.1. UN number, proper shipping name, class and packaging group.:
Domestic Ground shipments
UN1824, Sodium Hydroxide Solution, 8, II

14.2. Additional information
TOXIC NOTE: Not DOT Toxic per 49 CFR 173.133(2)(i) as product has a calculated LC50 > 5,000 mL/m3 (vapors). However product is calculated to be a GHS inhalation hazard (H331 CAT 3 - vapors) and carries the OSHA skull and crossbones pictogram.

SECTION 15: Regulatory information

15.1. US Federal regulations

HR-2800	
All chemical substances in this product are listed in the EPA (Environmental Protection Agency) TSCA (Toxic Substances Control Act) Inventory	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard

Sodium hydroxide (1310-73-2)
Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on SARA Section 313 (Specific toxic chemical listings)

RQ (Reportable quantity, section 304 of EPA's List of Lists) :	1000 lb

2-Phenoxyethanol (122-99-6)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Furfuryl alcohol (98-00-0)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

.beta.-Alanine, N-(2-carboxyethyl)-N-[3-(decyloxy)propyl]-, monosodium salt (64972-19-6)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations CANADA

Sodium hydroxide (1310-73-2)
Listed on the Canadian DSL (Domestic Substances List) inventory.

2-Phenoxyethanol (122-99-6)
Listed on the Canadian DSL (Domestic Substances List) inventory.

Furfuryl alcohol (98-00-0)
Listed on the Canadian DSL (Domestic Substances List) inventory.

.beta.-Alanine, N-(2-carboxyethyl)-N-[3-(decyloxy)propyl]-, monosodium salt (64972-19-6)
Listed on the Canadian DSL (Domestic Substances List) inventory.

EU-Regulations

No additional information available

15.2.2. National regulations

Sodium hydroxide (1310-73-2)
Listed on the AICS (the Australian Inventory of Chemical Substances) Listed on Inventory of Existing Chemical Substances (IECSC) Listed on the Japanese ENCS (Existing & New Chemicals Substances) inventory. Listed on the Korean ECL (Existing Chemical List) inventory.

2-Phenoxyethanol (122-99-6)

Listed on Inventory of Existing Chemical Substances (IECSC)
Listed on the AICS (the Australian Inventory of Chemical Substances)
Listed on the Japanese ENCS (Existing & New Chemicals Substances) inventory.
Listed on the Korean ECL (Existing Chemical List) inventory.

Furfuryl alcohol (98-00-0)

Listed on the AICS (the Australian Inventory of Chemical Substances)
Listed on Inventory of Existing Chemical Substances (IECSC)
Listed on the Japanese ENCS (Existing & New Chemicals Substances) inventory.
Listed on KECI (Chemical Inventory of Korea)

.beta.-Alanine, N-(2-carboxyethyl)-N-[3-(decyloxy)propyl]-, monosodium salt (64972-19-6)

Listed on the AICS (the Australian Inventory of Chemical Substances) Listed
on KECI (Chemical Inventory of Korea)

15.3. US State regulations

Sodium hydroxide (1310-73-2)

U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Massachusetts - Right To Know List
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

Furfuryl alcohol (98-00-0)

U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

Other information : None

NFPA health hazard : 3
NFPA fire hazard : 1
NFPA reactivity : 1

HMIS III Rating

Health : 3
Flammability : 1
Physical : 1
Personal Protection :

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