

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
 2955 Lone Oak Circle
 Eagan, MN 55121
 651-686-5027

1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

<u>Hazard Code</u>	<u>Hazard Class</u>	<u>Hazard Category</u>
H302	Acute toxicity, oral	4
H311	Acute toxicity, dermal	3
H314	Skin corrosion/irritation	1B
H331	Acute toxicity, inhalation	3
H351	Carcinogenicity	2
H370	Specific target organ toxicity, single exposure (Skin, Eyes, Mucous Membranes)	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
- H311: Toxic in contact with skin
- H314: Causes severe skin burns and eye damage
- H331: Toxic if inhaled
- 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

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P271: Use only outdoors or in a well-ventilated area
P280: Wear protective gloves/protective clothing/eye protection/face protection
P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P311: Call a POISON CENTER or doctor/physician
P308+313: IF exposed or concerned: Get medical advice/attention
P301+330+331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
P330: Rinse mouth
P301+312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
P303+361+353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
P363: Wash contaminated clothing before reuse
P310: Immediately call a POISON CENTER or doctor/physician
P321: Specific treatment (see SECTION 4)
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 #	%
Furfuryl Alcohol	98-00-0	20 - 30
Glycol Ether EPH -Ethylene glycol monophenyl ether - 2-Phenoxyethanol	122-99-6	20 - 30
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 medical advice/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. Dermal 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.

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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 : Flash Point > 200 F

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

6.1. Personal precautions, protective equipment and emergency procedures

General measures : 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).

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 containment 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

Sodium hydroxide (1310-73-2)	
ACGIH Ceiling (mg/m ³)	2 mg/m ³
OSHA PEL (TWA) (mg/m ³)	2 mg/m ³
OSHA PEL (Ceiling) (mg/m ³)	2 mg/m ³

2-Phenoxyethanol (122-99-6)	
Remark (ACGIH)	OELs not established
Remark (US OSHA)	OELs not established

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Furfuryl alcohol (98-00-0)	
ACGIH TWA (ppm)	10 ppm
ACGIH STEL (ppm)	15 ppm
OSHA PEL (TWA) (mg/m ³)	200 mg/m ³
OSHA PEL (TWA) (ppm)	50 ppm
OSHA PEL (STEL) (mg/m ³)	60 mg/m ³ vacated
OSHA PEL (STEL) (ppm)	15 ppm vacated

.beta.-Alanine, N-(2-carboxyethyl)-N-[3-(decyloxy)propyl]-, monosodium salt (64972-19-6)	
Remark (ACGIH)	OELs not established
Remark (US OSHA)	OELs not established

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 resistant 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

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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

Acute toxicity : Harmful if swallowed. Harmful on contact with skin. Harmful if inhaled.

Sodium Hydroxide, CAS# 1310-73-2		
Oral LD50 rat	Dermal LD50 rabbit	Inhalation LC50
Not Available	1350 mg/kg	Not Available

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 xylenesulphonate, CAS# 1300-72-7		
Oral LD50 rat	Dermal LD50 rabbit	Inhalation LC50
>= 7,200 mg/kg	> 2,000 mg/kg	Not Available

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	Not Available

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 exposure)	: May cause damage to organs (lung/respiratory system, central nervous system) through prolonged or repeated exposure (Inhalation).
Aspiration hazard	: Not classified

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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. Dermal toxic. May be absorbed through skin and produce systemic effects. May be harmful if 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.

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

UN2922, CORROSIVE LIQUIDS, TOXIC, N.O.S. (Sodium Hydroxide / Furfuryl Alcohol), 8, (6.1), II

14.2. Additional information

SECTION 15: Regulatory information

15.1. US Federal regulations

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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
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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
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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

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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 KECl (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 KECl (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

Indication of changes : September 9, 2010
Other information : None

NFPA health hazard : 3 - Short exposure could cause serious temporary or residual injury even though prompt medical attention was given.
NFPA fire hazard : 1 - Must be preheated before ignition can occur.



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NFPA reactivity : 1 - Normally stable, but can become unstable at elevated temperatures and pressures or may react with water with some release of energy, but not violently.

HMIS III Rating

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

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product