

Disclaimer: The information in this SDS relates to the product named and is based upon information Epoxy International considers to be accurate. No warranty expressed or implied is intended. This information is offered exclusively for your consideration and interpretation. The Corporate Safety and Environmental Affairs Department is responsible for the preparation of this Safety Data Sheet.

Safety Data Sheet

Epoxy International

IRON-BOND 1 RESIN**SDS Number:** 201-R
SDS Date: 10/08/2015

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product name: IRON-BOND 1 (Resin)
SDS number: 201-R
Product type: Resin
Chemical family: Epoxy resin
Company Address: Epoxy International
200 Allens Ave,
Providence, RI 02903
Email: info@epoxyinternational.com
Emergency Contact Number : (888) 522-6742
Fax: (877) 522-6742
Chemtrec (Domestic): (800) 424-9300
Chemtrec (International): (703) 527-3887

SECTION 2: HAZARDS IDENTIFICATION

Form: Viscous Liquid
OSHA/HCS Status: This material is considered hazardous by the OSHA Hazard Communications Standard (29 CFR 1910.1200)
Emergency overview: WARNING!
CAUSES EYE AND SKIN IRRITATION. MAY CAUSE ALLERGIC SKIN REACTION. MAY CAUSE RESPIRATORY TRACT IRRITATION. HEATED MATERIAL CAN CAUSE THERMAL BURNS.

Potential acute health effects:

Inhalation: Slightly irritating to the respiratory system.
Ingestion: Not expected to be harmful under normal conditions of use.
Skin: Irritating to skin. May cause sensitization by skin contact material. Can cause thermal burns.
Eyes: Irritating to eyes. Heated material can cause thermal burns.

Potential chronic health effects:

Chronic effects: No known significant effects or critical hazards.
Carcinogenicity: No known significant effects or critical hazards.
Mutagenicity: No known significant effects or critical hazards.
Teratogenicity: No known significant effects or critical hazards.
Developmental effects: No known significant effects or critical hazards.
Fertility effects: No known significant effects or critical hazards.
Target organs: Review section 2 and 11 for any additional assessments.

Epoxy InternationalEmail: info@epoxyinternational.com

Over-exposure signs/symptoms

| | |
|--------------------|---|
| Inhalation: | Adverse symptoms may include the following respiratory tract irritation coughing. |
| Skin: | Adverse symptoms may include the following: irritation and or redness |
| Eyes: | Adverse symptoms may include the following: pain and or irritation, watering and redness. |

SECTION 3: COMPOSITION INFORMATION ON INGREDIENTS

| Ingredient's name | CAS NUMBER | % BY WEIGHT |
|--|-------------------|--------------------|
| bisphenol-A-(epichlorhydrin) epoxy resin | 25068-38-6 | 75 – 100 |
| Limestone | 1317-65-3 | <= 10 |

**Any applicable Canadian trade secret numbers will be listed in section 15.

SECTION 4: FIRST AID MEASURES

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| Eye contact: | Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention. |
| Skin contact: | Flush contaminated skin with a plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wears gloves, continue to rinse for at least 10 minutes. In the event of any complains or symptoms, avoid further exposure. Wash clothing before reuse. For contact with hot product flush contaminated skin with large amounts of cold water to dissipate heat. Gear with clean cotton sheeting or gauze. Get medical attention immediately. |
| Inhalation: | Move exposed person to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. |
| Ingestion: | Wash out mouth with water. Remove dentures if any. Move person to fresh air. Keep person warm and at rest. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting is dangerous. Do not induce vomiting unless directed to do so medical personnel. If vomiting occurs, the head should be kept low that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. |
| Protection of First Aid personnel: | In the event of body contact. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. |
| Notes to physician: | No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. |

SECTION 5: FIRE FIGHTING MEASURES

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|---------------------------------------|---|
| FLAMMABILITY OF THE PRODUCT: | In a fire or if heated, a pressure increase will occur and the container may burst. |
| EXTINGUISHING MEDIA | |
| Suitable: | Use an extinguishing agent suitable for the surrounding fire. |
| Not suitable: | N/A |
| Special exposure hazards: | Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. |
| Hazardous Combustion Products: | Decomposition products may include the following materials: carbon oxides. |
| Special protective equipment: | Fire-fighters should wear appropriate protective equip self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. |

SECTION 6: ACCIDENTAL RELEASE MEASURES

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|-----------------------------------|--|
| Personal precautions: | No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8). |
| Environmental precautions: | Avoid dispersal of spilled material and runoff and contact with soil, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). |
| Large spill: | Stop leak if without risk. Move containers from spill area. For molten material, allow the product to cool and solidify. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. |
| Small spill: | Use an extinguishing agent suitable for the surrounding fire. |

*For safety and environmental precautions, please review entire SDS for necessary information.

SECTION 7: HANDLING AND STORAGE

| | |
|------------------|---|
| Handling: | Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processes. Workers should wash hands and face before eating, drinking or smoking. Persons with history of skin sensitization problems should not be employed in any process in which this product is used. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. |
| Storage: | Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Note: This resin may be handled, shipped and stored at elevated temperature in bulk. |

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

CONSULT LOCAL AUTHORITIES FOR ACCEPTABLE EXPOSURES LIMITS:

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|---|---|
| Ventilation: | Use only with adequate ventilation. If user operations generate dust, fumes gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. |
| Eyes: | Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. |
| Skin: | Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. |
| Clothing measures: | Employee must wear appropriate protective clothing and equipment to prevent any possibility of skin contact with this substance. Uniforms, coveralls, or a lab coat should be worn. |
| HYGIENE MEASURES: | Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to workstation location. |
| Respiratory measures: | Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels. The hazards of the products of the safe working limits of the selected respirator. |
| Recommended monitoring procedures: | If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. |
| Environmental exposure controls: | Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels. |

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

GENERAL INFORMATION:

| | |
|-----------------------------------|-----------------------------------|
| PHYSICAL FORM | Liquid |
| COLOR | White |
| ODOR | Mild |
| BOILING POINT | ND |
| FLASH POINT: | > 93°C , > 199°F |
| SOLUBILITY IN WATER | Not miscible or difficult to mix. |
| SPECIFIC GRAVITY (WATER=1) | 3.2 |
| VAPOR PRESSURE | NA |
| VAPOR DENSITY (AIR = 1) | 1.200 g/cm @ 20°C , 68°F |
| VOLATILES | ND |
| SHELF LIFE | 1 Year |

SECTION 10: STABILITY AND REACTIVITY

| | |
|------------------|---|
| Stability | The product is stable. Under normal conditions of storage and use, hazardous polymerization will not occur. |
|------------------|---|

| | |
|---|---|
| Materials to avoid: | Reactive or incompatible with the following materials: Oxidizers, Acids, Amines |
| Conditions to avoid: | Ceramic oxidizer. |
| Hazardous decompositions products: | Decomposition products may include the following materials: Carbon Oxides. |
| Hazardous polymerization conditions: | CONDITIONS Heat may cause hazardous polymerization. |
| Reactivity: | Stable under normal conditions |
| Other hazards: | Reacts with considerable heat release with some curing agents. |

SECTION 11: TOXICOLOGICAL INFORMATION

| | |
|-----------------------|--------------------------------|
| Acute toxicity | Primary Irritant Effect |
| Skin | May cause skin irritation |
| Eye | Irritating Effect |
| Sensitization | Possible through skin contact |

SECTION 13: DISPOSAL INFORMATION

Waste disposal: The generations of waste should be avoided or minimize wherever possible. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: TRANSPORTATION INFORMATION

The data provided in this section is for information only and may not be specific to your package size or mode of transport. You will need to apply the appropriate regulations to properly classify your shipment for transportation.

International Transport Regulations

| Regulatory Information | UN/NA Number | Proper shipping name | Classes/Packaging Group | Reportable Quantity (RQ) |
|-------------------------------|---------------------|-----------------------------|--------------------------------|---------------------------------|
| CFR | non-regulated | non-regulated | non-regulated | non-regulated |
| IATA (Cargo) | non-regulated | non-regulated | non-regulated | non-regulated |
| TDG | non-regulated | non-regulated | non-regulated | non-regulated |
| IMO/IMDG | non-regulated | non-regulated | non-regulated | non-regulated |

SECTION 15: REGULATORY INFORMATION

US Regulations

HCS Classification Irritating materials, sensitizing material

Canada (WHMIS): Class D-2B: Material causing other toxic effects (Toxic).

Canada lists: Canadian NPRI: None Required

China (IECSC) On the IECSC inventory

US Federal **SARA 311/312** classification immediate (acute) health hazard.

Regulations **SARA 313 – Supplier Notification**

This product contains the following toxic chemical(s) subject to the reporting requirements of section 313 of Title 3 of the Superfund Amendments and Reauthorization Act

of 1986, and Subpart C-Supplier Notification Requirement of 40 CFR Part 372.
None required.

SARA 302 Extremely Hazardous Substances None Required

| | | |
|----------------------------------|--|---|
| State Regulation | Massachusetts RTK Substances | None Required |
| | New Jersey RTK Substances | None Required |
| | Pennsylvania RTK Hazardous Substances | None Required |
| | California Prop. 65 | WARNING: This Product contains a chemical know to the state of California to cause cancer. Oxirane. (Phenoxymethyl) –122-60-1 |
| International Regulations | Europe inventory | all components are listed or exempted. |
| | Australia inventory (AICS) | all components are listed or exempted. |
| | China inventory (IECSC) | all components are listed or exempted. |
| | Korea inventory (KECI) | all components are listed or exempted. |
| | Philippines inventory (PICCS) | all components are listed or exempted. |
| | Japan inventory (ENCS) | all components are listed or exempted. |
| | Canada inventory | all components are listed or exempted. |
| | United States inventory (TSCA 8b) | all components are listed or exempted. |
| | New Zealand inventory (NZIoC) | Not determined. |

WARNING: This product contains the following chemicals that are known to the State of California to cause cancer, birth defects or other reproductive harm. Unless a concentration is specified in Section 2 of the SDS, the below chemical/s are present in trace amounts.

| | |
|------------------|-------------------|
| Component | CAS Number |
| None reportable | N/A |

SECTION 16: REGULATORY INFORMATION

HMIS® Hazard Ratings

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on SDSs by OSHA's 29 CFR 1910.1200, we choose to provide them as a service to our customers using HMIS®. These ratings are to be used only with a fully implemented HMIS® program. To deal adequately with the safe handling of this material, all the information contained in this SDS must be considered.

NPCA recommends that employers must determine appropriate PPE for the actual conditions under which this product is used in their workplace. For information on PPE codes, consult the HMIS® Implementation Manual.

When two ratings are provided for Health, the first represents the material 'as supplied', and the second represents the material 'in use'.

* = chronic health hazard

HMIS® is a registered trademark of the National Paint and Coatings Association (NPCA).

Health

2

Flammability

1

Physical Hazard

0

Notice to reader:

The information provided herein was believed by Epoxy International to be accurate at the time of preparation or prepared from sources believed to be reliable, but it is the responsibility of the user to investigate and understand other pertinent sources of information, to comply suitability of the product for its intended use. All products supplied by Epoxy International are subject to Epoxy International' terms and conditions of sale. EPOXY INTERNATIONAL MAKES NO WARRANTY, EXPRESSED OR FOR ANY PURPOSE OF CONCERNING THE ACCURACY OF ANY INFORMATION PROVIDED BY EPOXY INTERNATIONAL, except that the product shall conform to Epoxy International specifications. Nothing contained herein constitutes an offer for the sale of any product.

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Safety Data Sheet

Epoxy International

IRON-BOND 1 HARDENER

SDS Number: 201-H
SDS Date: 09/27/2015

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product name: IRON-BOND 1 (HARDENER)
SDS number: 201-H
Product type: HARDENER
Chemical family: Epoxy HARDENER
Company Address: Epoxy International
410 South Main St
Providence, RI 02903
Email: info@epoxyinternational.com
Emergency Contact Number : (888) 522-6742
Fax: (877) 522-6742
Chemtrec (Domestic): (800) 424-9300
Chemtrec (International): (703) 527-3887

SECTION 2: HAZARDS IDENTIFICATION

Form: Viscous Liquid

OSHA/HCS Status: This material is considered hazardous by the OSHA Hazard Communications Standard (29 CFR 1910.1200)

Emergency overview: WARNING!
CAUSES EYE AND SKIN IRRITATION. MAY CAUSE ALLERGIC SKIN REACTION. MAY CAUSE RESPIRATORY TRACT IRRITATION. HEAD MATERIAL CAN CAUSE THERMAL BURNS.

Potential acute health effects:

Inhalation: Slightly irritating to the nose and to the respiratory system.
Ingestion: Will cause irritation of mouth, throat, and stomach.
Skin: Irritating to skin. May cause sensitization by skin contact material. Can cause thermal burns.
Eyes: Irritating to eyes. Heated material can cause thermal burns. Risk of serious damage to eyes. Excessive tear formation

Potential chronic health effects:

Chronic effects: Contains material that can cause target organ damage.
Carcinogenicity: No known significant effects or critical hazards.
Mutagenicity: No known significant effects or critical hazards.
Teratogenicity: Contains material which may cause birth defects, based on animal data.
Developmental effects: No known significant effects or critical hazards.

Epoxy International
Email: info@atomadhesives.com

| | |
|---|--|
| Fertility effects: | No known significant effects or critical hazards. |
| Target organs: | Contains material which causes damage to the following organs: Kidneys, Lungs. Review Section 2 and 11 for any additional assessments. |
| <u>Over-exposure signs/symptoms</u> | |
| Inhalation: | Adverse symptoms may include the following: respiratory tract irritation coughing. Wheezing and breathing difficulties, asthma. |
| Ingestion: | Adverse symptoms may include the following: nausea, vomiting and diarrhea. |
| Skin: | Adverse symptoms may include the following: irritation and or redness |
| Eyes: | Adverse symptoms may include the following: pain and or irritation, watering and redness. |
| Medical Conditions aggravated By over-exposure | Pre-existing respiratory and skin disorders and disorders involving any other target organs mentioned in this SDS as being at risk may be aggravated by over-exposure to this product. |

SECTION 3: COMPOSITION INFORMATION ON INGREDIENTS

| Ingredient's name | CAS NUMBER | % BY WEIGHT |
|---------------------------------------|-------------------|--------------------|
| Calcium carbonate | 471-34-1 | 25 - 50 |
| 2-piperazin-1-ylethylamine | 140-31-8 | 10 – 25 |
| 2-(2-aminoethylamino)ethanol | 111-41-1 | 10 – 25 |
| cyclohex-1,2-ylenediamine | 694-83-7 | 10 - 25 |
| 2,4,6-tris(dimethylaminomethyl)phenol | 90-72-2 | <= 5 |
| Limestone | 1317-65-3 | <=5 |

**Any applicable Canadian trade secret numbers will be listed in section 15.

SECTION 4: FIRST AID MEASURES

| | |
|----------------------|---|
| Eye contact: | Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention. Chemical burns must be treated promptly by a physician |
| Skin contact: | Flush contaminated skin with a plenty of water. Wash contaminated clothing thoroughly with water before removing it, or wears gloves, continue to rinse for at least 10 minutes. In the event of any complains or symptoms, avoid further exposure. Wash clothing before reuse. For contact with hot product flush contaminated skin with large amounts of cold water to dissipate heat. Gear with clean cotton sheeting or gauze. Get medical attention immediately. |
| Inhalation: | Move exposed person to fresh air. Keep person warm and at rest. If not breathing, if breathing is |

irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Ingestion: Wash out mouth with water. Remove dentures if any. Move person to fresh air. Keep person warm and at rest. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting is dangerous. Do not induce vomiting unless directed to do so medical personnel. If vomiting occurs, the head should be kept low that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Protection of First Aid personnel: In the event of body contact. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Notes to physician: In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposure person may need to be kept under medical surveillance for 48 hours.

SECTION 5: FIRE FIGHTING MEASURES

FLAMMABILITY OF THE PRODUCT: In a fire or if heated, a pressure increase will occur and the container may burst.

EXTINGUISHING MEDIA

Suitable: Use an extinguishing agent suitable for the surrounding fire.

Not suitable: N/A

Special exposure hazard: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Hazardous Combustion Products: Decomposition products may include the following materials: carbon oxides.

Special protective equipment: Fire-fighters should wear appropriate protective equip self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).

Environmental: Avoid dispersal of spilled material and runoff and contact with soil, drains and sewers. Inform the relevant

precautions: authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Large spill: Stop leak if without risk. Move containers from spill area. For molten material, allow the product to cool and solidify. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

Small spill: Use an extinguishing agent suitable for the surrounding fire.

*For safety and environmental precautions, please review entire SDS for necessary information.

SECTION 7: HANDLING AND STORAGE

Handling Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processes. Workers should wash hands and face before eating, drinking or smoking. Persons with history of skin sensitization problems should not be employed in any process in which this product is used. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Storage: Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Note: This HARDENER may be handled, shipped and stored at elevated temperature in bulk.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

CONSULT LOCAL AUTHORITIES FOR ACCEPTABLE EXPOSURES LIMITS:

Ventilation: Use only with adequate ventilation. If user operations generate dust, fumes gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Eyes: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.

Skin: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Clothing measures: Employee must wear appropriate protective clothing and equipment to prevent any possibility of skin contact with this substance. Uniforms, coveralls, or a lab coat should be worn.

HYGIENE MEASURE Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to workstation location.

Respiratory measures: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the products of the safe working limits of the selected respirator.

Recommended monitoring procedures: If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

| | |
|---|--|
| Environmental exposure controls: | Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels. |
|---|--|

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

GENERAL INFORMATION:

| | |
|-----------------------------------|---|
| PHYSICAL FORM | Medium Paste Liquid |
| COLOR | Grey |
| ODOR | Distinctive |
| BOILING POINT | ND |
| FLASH POINT: | >94°C, >201°F |
| SOLUBILITY IN WATER | Not miscible or difficult to mix. Not miscible or difficult to mix. |
| SPECIFIC GRAVITY (WATER=1) | 1.2 |
| VAPOR PRESSURE | 0.1 hPa (0 mm Hg) @ 20°C , 68°F |
| VAPOR DENSITY (AIR = 1) | 1.640 g/cm ³ @ 20°C , 68°F |
| VOLATILES | ND |
| SHELF LIFE | 1 year |

SECTION 10: STABILITY AND REACTIVITY

| | |
|---|---|
| Stability | The product is stable. Under normal conditions of storage and use, hazardous polymerization will not occur. |
| Materials to avoid: | Reactive or incompatible with the following materials: Oxidizers, Acids, Amines |
| Conditions to avoid: | Ceramic oxidizer. |
| Hazardous decompositions products: | Decomposition products may include the following materials: Carbon Oxides. |
| Hazardous polymerization conditions: | CONDITIONS Heat may cause hazardous polymerization. |
| Reactivity: | Stable under normal conditions |
| Other hazards: | Reacts with considerable heat release with some curing agents. |

SECTION 11: TOXICOLOGICAL INFORMATION

| Ingredient name | Oral toxicity |
|------------------------------|--|
| piperazin-1-ylethylamine | |
| Primary Entry Route(s) | Skin, eyes, inhalation |
| Oral LD50 | 2140 mg/kg (rat) |
| Dermal LD50 | 880 mg/kg (rabbit) |
| 2-(2-aminoethylamino)ethanol | |
| Oral LD50 | 3000 mg/kg (rat) |
| Dermal LD50 | 2250 mg/kg (rat) |
| Primary irritant effect: | |
| on the skin: | Primary irritant effect: Caustic effect on skin and mucous membranes |

| | |
|----------------|---|
| on the eye: | Ceramic caustic effect |
| Sensitization: | Sensitization possible through skin contact |

Additional toxicological information

The product shows the following dangers according to internally approved calculation methods for preparations:

Corrosive Irritant Swallowing will lead to a Ceramic caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

NOTE: These substances are listed as TOXIC in Pennsylvania state

SECTION 12: ECOLOGICAL INFORMATION

Environmental effects

| | |
|---------------------------------|---|
| Potential effect on environment | Do not allow entering drains, sewers or watercourses. |
| Mobility | Slightly soluble |
| Potential to bioaccumulation | No known significant effects or critical hazards |
| Other adverse effects | None |

SECTION 13: DISPOSAL INFORMATION

Waste disposal: The generations of waste should be avoided or minimize wherever possible. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: TRANSPORTATION INFORMATION

The data provided in this section is for information only and may not be specific to your package size or mode of transport. You will need to apply the appropriate regulations to properly classify your shipment for transportation.

International Transport Regulations

| Regulatory Information | UN/NA Number | Proper shipping name | Classes/Packaging Group | Reportable Quantity (RQ) |
|-------------------------------|---------------------|-----------------------------|--------------------------------|---------------------------------|
| CFR | non-regulated | non-regulated | non-regulated | non-regulated |
| IATA (Cargo) | non-regulated | non-regulated | non-regulated | non-regulated |
| TDG | non-regulated | non-regulated | non-regulated | non-regulated |
| IMO/IMDG | non-regulated | non-regulated | non-regulated | non-regulated |

SECTION 15: REGULATORY INFORMATION

US Regulations

HCS Classification Irritating materials, sensitizing material

Canada (WHMIS) Class D-2B: Material causing other toxic effects (Toxic).

Canada lists: Canadian NPRI: None Required

China (IECSC) On the IECSC inventory

US Federal **SARA 311/312** classification immediate (acute) health hazard.

Regulations **SARA 313 – Supplier Notification**

This product contains the following toxic chemical(s) subject to the reporting requirements of section 313 of Title 3 of the Superfund Amendments and Reauthorization Act of 1986, and Subpart C-Supplier Notification Requirement of 40 CFR Part 372.

None required.

SARA 302 Extremely Hazardous Substances None Required

State Regulation **Massachusetts RTK Substances**

None Required

New Jersey RTK Substances

None Required

Pennsylvania RTK Hazardous Substances

None Required

California Prop. 65

WARNING: This Product contains a chemical
known to the state of California to cause
cancer. Oxirane. (Phenoxymethyl) –122-60-1

**International
Regulations**

Europe inventory

all components are listed or exempted.

Australia inventory (AICS)

all components are listed or exempted.

China inventory (IECSC)

all components are listed or exempted.

Korea inventory (KECI)

all components are listed or exempted.

Philippines inventory (PICCS)

all components are listed or exempted.

Japan inventory (ENCS)

all components are listed or exempted.

Canada inventory

all components are listed or exempted.

United States inventory (TSCA 8b)

all components are listed or exempted.

New Zealand inventory (NZIoC)

Not determined.

WARNING: This product contains the following chemicals that are known to the State of California to cause cancer, birth defects or other reproductive harm. Unless a concentration is specified in Section 2 of the SDS, the below chemical/s are present in trace amounts.

Component

CAS Number

None
reportable

N/A

SECTION 16: REGULATORY INFORMATION

HMIS® Hazard Ratings

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on SDSs by OSHA's 29 CFR 1910.1200, we choose to provide them as a service to our customers using HMIS®. These ratings are to be used only with a fully implemented HMIS® program. To deal adequately with the safe handling of this material, all the information contained in this SDS must be considered.

NPCA recommends that employers must determine appropriate PPE for the actual conditions under which this product is used in their workplace. For information on PPE codes, consult the HMIS® Implementation Manual.

When two ratings are provided for Health, the first represents the material 'as supplied', and the second represents the material 'in use'.

* = chronic health hazard

HMIS® is a registered trademark of the National Paint and Coatings Association (NPCA).

Health

Flammability

Physical Hazard

3*

1

0

Notice to reader:

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