

SAFETY DATA SHEET

RENLAM® 1310 US

1. Product and company identification

Product name : RENLAM® 1310 US
Material uses : Component for laminating systems
(M)SDS # : 00066436
Validation date : 9/16/2013.

Supplier/Manufacturer : Huntsman Advanced Materials Americas LLC
P.O. Box 4980
The Woodlands, TX 77387

Non-Emergency phone: (800) 257-5547

e-mail address of person responsible for this SDS : MSDS@huntsman.com

In case of emergency (24h/7day) : Chemtrec: (800) 424-9300 or (703) 527-3887

Section 2. Hazards identification

Physical state : Liquid.
Color : Black.
OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : SKIN CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
SKIN SENSITIZATION - Category 1
GERM CELL MUTAGENICITY - Category 2
AQUATIC HAZARD (ACUTE) - Category 2
AQUATIC HAZARD (LONG-TERM) - Category 2

GHS label elements

Hazard pictograms :



Signal word : Warning

Hazard statements : Causes serious eye irritation.
Causes skin irritation.
May cause an allergic skin reaction.
Suspected of causing genetic defects.
Toxic to aquatic life with long lasting effects.

Section 2. Hazards identification

Precautionary statements : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wear protective gloves. Wear eye or face protection. Avoid release to the environment. Avoid breathing vapor. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Collect spillage. IF exposed or concerned: Get medical attention. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention. Store locked up. Dispose of contents and container in accordance with all local, regional, national and international regulations.

Other hazards which do not result in classification : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number
TETRAGLYCIDYL METHYLENEDIANILINE	60 - 100	28768-32-3
Butanedioldiglycidyl ether	7 - 13	2425-79-8
Bisphenol A epoxy resin	1 - 3	25068-38-6

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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 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. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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 may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open



Section 4. First aid measures

- airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Notes to physician** : No specific treatment. Treat symptomatically. Call medical doctor or poison control center immediately if large quantities have been ingested.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

- Flash point** : Closed cup: 117°C (242.6°F)
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
halogenated compounds
metal oxide/oxides
- Extinguishing media**
- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.
- Specific hazards arising from the chemical** : In a fire or if heated, a pressure increase will occur and the container may burst. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
- Special protective actions for fire-fighters** : 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.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : 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.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

Section 6. Accidental release measures

Methods and materials for containment and cleaning up : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. 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.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : 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. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Appropriate engineering controls : 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.

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.

Individual protection measures

Section 8. Exposure controls/personal protection

- 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. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : 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. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : 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.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : 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 product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

- Physical state** : Liquid.
- Color** : Black.
- Odor** : Not available.
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point/Freezing point** : Not available.
- Boiling/condensation point** : Not available.
- Flash point** : Closed cup: 117°C (242.6°F)
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Not available.
- Lower and upper explosive (flammable) limits** : Not available.
- Vapor pressure** : Not available.
- Vapor density** : Not available.
- Specific gravity** : 1.24 to 1.3
- Water Solubility** : Not available.
- Water Solubility** : Slight

Section 9. Physical and chemical properties

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Not available.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Test	Endpoint	Species	Result
TETRAGLYCIDYL METHYLENEDIANILINE	-	LC50 Inhalation Dusts and mists	Rat - Male, Female	9110 mg/m ³
	-	LD50 Dermal	Rabbit - Male, Female	>3000 mg/kg
Butanedioldiglycidyl ether	OECD 401 Acute Oral Toxicity	LD50 Oral	Rat - Male, Female	>5000 mg/kg
	No official guidelines	LD50 Dermal	Rat - Male, Female	2150 mg/kg
Bisphenol A epoxy resin	OECD 401 Acute Oral Toxicity	LD50 Oral	Rat - Male, Female	1163 mg/kg
	-	LC0 Inhalation Vapor	Rat - Male	0.00001 ppm
	OECD 402 Acute Dermal Toxicity	LD50 Dermal	Rat - Male, Female	>2000 mg/kg
	OECD 420 Acute Oral Toxicity - Fixed Dose Method	LD50 Oral	Rat - Female	>2000 mg/kg

Irritation/Corrosion



Section 11. Toxicological information

Product/ingredient name	Test	Species	Result
Butanedioldiglycidyl ether	OECD 404 Acute Dermal Irritation/Corrosion	Rabbit	Skin - Non-irritant.
	OECD 405 Acute Eye Irritation/Corrosion	Rabbit	Eyes - Severe irritant
Bisphenol A epoxy resin	OECD 404 Acute Dermal Irritation/Corrosion	Rabbit	Skin - Mild irritant
	OECD 405 Acute Eye Irritation/Corrosion	Rabbit	Eyes - Mild irritant

Conclusion/Summary

Skin	: TETRAGLYCIDYL	No additional information.
	METHYLENEDIANILINE	
	Butanedioldiglycidyl ether	Based on the human occupational exposure data, this substance is considered as irritating to skin.
	Bisphenol A epoxy resin	Irritating to skin.
Eyes	: TETRAGLYCIDYL	No additional information.
	METHYLENEDIANILINE	
	Butanedioldiglycidyl ether	Severely irritating to eyes.
	Bisphenol A epoxy resin	Irritating to eyes.
Respiratory	: TETRAGLYCIDYL	No additional information.
	METHYLENEDIANILINE	
	Butanedioldiglycidyl ether	No additional information.
	Bisphenol A epoxy resin	No additional information.

Sensitization

Product/ingredient name	Test	Route of exposure	Species	Result
Butanedioldiglycidyl ether	OECD 406 Skin Sensitization	skin	Guinea pig	Sensitizing
Bisphenol A epoxy resin	OECD 429 Skin Sensitization: Local Lymph Node Assay	skin	Mouse	Sensitizing

Mutagenicity

Product/ingredient name	Test	Result
TETRAGLYCIDYL METHYLENEDIANILINE	Experiment: In vitro Subject: Bacteria Metabolic activation: +/-	Positive
	Experiment: In vitro Subject: Mammalian-Animal Cell: Somatic Metabolic activation: +/-	Positive
Butanedioldiglycidyl ether	Experiment: In vivo Subject: Mammalian-Animal Cell: Somatic	Positive
	Experiment: In vitro Subject: Bacteria Metabolic activation: +/-	Positive
	Experiment: In vitro Subject: Mammalian-Animal Metabolic activation: +/-	Positive

Section 11. Toxicological information

Bisphenol A epoxy resin	Experiment: In vivo Subject: Mammalian-Animal Cell: Somatic	Negative
	Experiment: In vitro Subject: Bacteria Metabolic activation: +/-	Positive
	Experiment: In vitro Subject: Mammalian-Animal Cell: Somatic Metabolic activation: +/-	Positive
	Experiment: In vivo Subject: Mammalian-Animal Cell: Germ	Negative
	Experiment: In vivo Subject: Mammalian-Animal Cell: Somatic	Negative

Carcinogenicity

Product/ingredient name	Test	Species	Dose	Exposure	Result/Result type
Bisphenol A epoxy resin	OECD 453 Combined Chronic Toxicity/ Carcinogenicity Studies	Rat - Male, Female	15 mg/kg	2 years; 7 days per week	Negative - Oral - NOAEL
	OECD 453 Combined Chronic Toxicity/ Carcinogenicity Studies	Rat - Female	1 mg/kg	2 years; 5 days per week	Negative - Dermal - NOEL
	OECD 453 Combined Chronic Toxicity/ Carcinogenicity Studies	Mouse - Male	0.1 mg/kg	2 years; 3 days per week	Negative - Dermal - NOEL

Reproductive toxicity

Product/ingredient name	Test	Species	Maternal toxicity	Fertility	Developmental effects
Bisphenol A epoxy resin	OECD 416 Two- Generation Reproduction Toxicity Study	Rat - Male, Female	Negative	Negative	Negative

Teratogenicity

Product/ingredient name	Test	Species	Result/Result type
Bisphenol A epoxy resin	OECD 414 Prenatal Developmental Toxicity Study	Rat - Female	Negative - Oral
	EPA CFR OECD 414 Prenatal Developmental Toxicity Study	Rabbit - Female Rabbit - Female	Negative - Dermal Negative - Oral



Section 11. Toxicological information

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
- Skin contact** : Causes skin irritation. May cause an allergic skin reaction.
- Ingestion** : Irritating to mouth, throat and stomach.

Potential chronic health effects

Product/ingredient name	Test	Endpoint	Species	Result
Butanedioldiglycidyl ether	OECD 407 Repeated Dose 28-day Oral Toxicity Study in Rodents	Sub-chronic NOAEL Oral	Rat - Male, Female	200 mg/kg
Bisphenol A epoxy resin	OECD 408 Repeated Dose 90-Day Oral Toxicity Study in Rodents	Sub-chronic NOAEL Oral	Rat - Male, Female	50 mg/kg
	OECD 411 Subchronic Dermal Toxicity: 90-day Study	Sub-chronic NOEL Dermal	Rat - Male, Female	10 mg/kg
	OECD 411 Subchronic Dermal Toxicity: 90-day Study	Sub-chronic NOAEL Dermal	Mouse - Male	100 mg/kg

- General** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : Suspected of causing genetic defects.
- 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.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Dermal	8730.2 mg/kg
Inhalation (dusts and mists)	11.9 mg/l

Section 12. Ecological information

Aquatic ecotoxicity

Section 12. Ecological information

Product/ingredient name	Test	Endpoint	Exposure	Species	Result
TETRAGLYCIDYL METHYLENEDIANILINE	OECD 201 Alga, Growth Inhibition Test	Acute EC50	72 hours Static	Algae	4.8 mg/l
	OECD 202 <i>Daphnia</i> sp. Acute Immobilisation Test	Acute EC50	48 hours Static	Daphnia	6.7 mg/l
	DIN DIN 38412 Part 8	Acute IC50	24 hours Static	Bacteria	>10000 mg/l
	OECD 203 Fish, Acute Toxicity Test	Acute LC50	96 hours Static	Fish	7 mg/l
	OECD 201 Alga, Growth Inhibition Test	Chronic EC10	72 hours Static	Algae	0.19 mg/l
Butanedioldiglycidyl ether	OECD 202 <i>Daphnia</i> sp. Acute Immobilisation Test	Acute EC50	24 hours Static	Daphnia	75 mg/l
	OECD 201 Alga, Growth Inhibition Test	Acute EL50	72 hours Static	Algae	>160 mg/l
	OECD 209 Activated Sludge, Respiration Inhibition Test	Acute IC50	3 hours Static	Bacteria	>100 mg/l
Bisphenol A epoxy resin	OECD 203 Fish, Acute Toxicity Test	Acute LC50	96 hours Static	Fish	24 mg/l
	-	Acute EC50	72 hours Static	Algae	9.4 mg/l
	OECD 202 <i>Daphnia</i> sp. Acute Immobilisation Test	Acute EC50	48 hours Static	Daphnia	1.7 mg/l
	-	Acute IC50	3 hours Static	Bacteria	>100 mg/l
	OECD 203 Fish, Acute Toxicity Test	Acute LC50	96 hours Static	Fish	1.5 mg/l
	OECD 211 <i>Daphnia Magna</i> Reproduction Test	Chronic NOEC	21 days Semi-static	Daphnia	0.3 mg/l

Persistence and degradability

Product/ingredient name	Test	Period	Result
TETRAGLYCIDYL METHYLENEDIANILINE	OECD 301F Ready Biodegradability - Manometric Respirometry Test	60 days	100 %
Butanedioldiglycidyl ether	OECD 301F Ready Biodegradability - Manometric Respirometry Test	28 days	43 %
Bisphenol A epoxy resin	OECD Derived from OECD 301F (Biodegradation Test)	28 days	5 %
Carbon black	-	28 days	<60 %

Conclusion/Summary : Bisphenol A epoxy resin Not readily biodegradable.
Carbon black Not applicable, inorganic substance / preparation.

Section 12. Ecological information

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Butanedioldiglycidyl ether Bisphenol A epoxy resin	- Fresh water 4.83 days Fresh water 3.58 days Fresh water 7.1 days	- -	Not readily Not readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
TETRAGLYCIDYL METHYLENEDIANILINE	2.12	-	low
Butanedioldiglycidyl ether Bisphenol A epoxy resin	-0.269 3.242	- 31	low low

Other adverse effects : No known significant effects or critical hazards.

Other ecological information

BOD5 : Not determined.

COD : Not determined.

TOC : Not determined.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. 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. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Section 14. Transport information

Proper shipping name





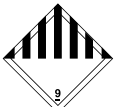

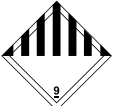

DOT : Environmentally hazardous substance, liquid, n.o.s. (TETRAGLYCIDYL METHYLENEDIANILINE). Marine pollutant

TDG : Environmentally hazardous substance, liquid, n.o.s. (TETRAGLYCIDYL METHYLENEDIANILINE). Marine pollutant

IMDG : Environmentally hazardous substance, liquid, n.o.s. (TETRAGLYCIDYL METHYLENEDIANILINE). Marine pollutant

IATA : Environmentally hazardous substance, liquid, n.o.s. (TETRAGLYCIDYL METHYLENEDIANILINE)

Section 14. Transport information

Regulatory information	UN number	Classes	PG*	Label	Additional information
DOT Classification	UN3082	9	III	 	marine pollutant only regulated for bulk and vessel shipments, per 49CFR171.4 (c) Exceptions. Except when all or part of the transportation is by vessel, the requirements of this subchapter specific to marine pollutants do not apply to non-bulk packagings transported by motor vehicle, rail car or aircraft.
TDG Classification	UN3082	9	III	 	-
IMDG Classification	UN3082	9	III	 	<u>Emergency schedules (EmS)</u> F-A, S-F
IATA Classification	UN3082	9	III	 	<u>Passenger and Cargo Aircraft</u> Quantity limitation: 450 L Packaging instructions: 964 <u>Cargo Aircraft Only</u> Quantity limitation: 450 L Packaging instructions: 964

PG* : Packing group

Section 15. Regulatory information

United States

U.S. Federal regulations

- TSCA 8(b) inventory** : All components are listed or exempted.
- TSCA 5(a)2 final significant new use rule (SNUR)** : No ingredients listed.
- TSCA 5(e) substance consent order** : No ingredients listed.
- TSCA 12(b) export notification** : No ingredients listed.
- SARA 311/312** : Immediate (acute) health hazard
Delayed (chronic) health hazard
- Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs)** : No ingredients listed.
- Clean Air Act - Ozone Depleting Substances (ODS)** : This product does not contain nor is it manufactured with ozone depleting substances.
- SARA 313** : No ingredients listed.
- CERCLA Hazardous substances** : No ingredients listed.

State regulations

- PENNSYLVANIA - RTK** : No ingredients listed.
- California Prop 65** : This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

International regulations

Canada

- CEPA DSL** : All components are listed or exempted.
- WHMIS Classes** : Class D-2B: Material causing other toxic effects (Toxic).

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

Brazil

- Regulation** : Decreto Federal n.º 2657/1998 Norma ABNT-NBR 14725-2012



Section 15. Regulatory information

- International lists** :
- Australia inventory (AICS):** All components are listed or exempted.
 - China inventory (IECSC):** All components are listed or exempted.
 - Japan inventory:** All components are listed or exempted.
 - Korea inventory:** All components are listed or exempted.
 - Malaysia Inventory (EHS Register):** Not determined.
 - New Zealand Inventory of Chemicals (NZIoC):** All components are listed or exempted.
 - Philippines inventory (PICCS):** At least one component is not listed.
 - Taiwan inventory (CSNN):** Not determined.

Section 16. Other information

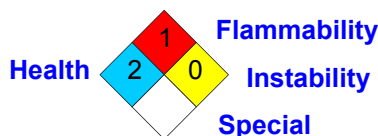
Hazardous Material Information System (U.S.A.) :

Health	2
Flammability	1
Physical hazards	0
Personal protection	

The customer is responsible for determining the PPE code for this material.

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 under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

National Fire Protection Association (U.S.A.) :



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

- Date of printing** : 9/16/2013.
Date of issue : 9/16/2013.
Date of previous issue : No previous validation.
Version : 1

Indicates information that has changed from previously issued version.

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Notice to reader

Section 16. Other information

While the information and recommendations in this publication are to the best of our knowledge, information and belief accurate at the date of publication, NOTHING HEREIN IS TO BE CONSTRUED AS A WARRANTY, EXPRESS OR OTHERWISE.

IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICABILITY OF SUCH INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF ANY PRODUCT FOR ITS OWN PARTICULAR PURPOSE.

THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behaviour should be determined by the user and made known to handlers, processors and end users.

NO PERSON OR ORGANIZATION EXCEPT A DULY AUTHORIZED HUNTSMAN EMPLOYEE IS AUTHORIZED TO PROVIDE OR MAKE AVAILABLE DATA SHEETS FOR HUNTSMAN PRODUCTS. DATA SHEETS FROM UNAUTHORIZED SOURCES MAY CONTAIN INFORMATION THAT IS NO LONGER CURRENT OR ACCURATE. NO PART OF THIS DATA SHEET MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM, OR BY ANY MEANS, WITHOUT PERMISSION IN WRITING FROM HUNTSMAN. ALL REQUESTS FOR PERMISSION TO REPRODUCE MATERIAL FROM THIS DATA SHEET SHOULD BE DIRECTED TO HUNTSMAN, MANAGER, PRODUCT SAFETY AT THE ABOVE ADDRESS.

REN 1510 US

Version 1.0 Revision Date: 08/12/2015 SDS Number: 400001012653 Date of last issue: -
Date of first issue: 08/12/2015

SECTION 1. IDENTIFICATION

Product name : REN 1510 US

Manufacturer or supplier's details

Company name of supplier : Huntsman Advanced Materials Americas LLC
Address : P.O. Box 4980
The Woodlands,
TX 77387
United States of America
Telephone : Non-Emergency: (800) 257-5547
E-mail address of person responsible for the SDS : MSDS@huntsman.com
Emergency telephone : Chemtrec: (800) 424-9300 or (703) 527-3887

Recommended use of the chemical and restrictions on use

Recommended use : Hardener

SECTION 2. HAZARDS IDENTIFICATION**GHS Classification**

Acute toxicity (Oral) : Category 4
Acute toxicity (Inhalation) : Category 4
Skin corrosion : Category 1B
Serious eye damage : Category 1
Skin sensitization : Category 1
Acute aquatic toxicity : Category 3
Chronic aquatic toxicity : Category 3

GHS Label element

Hazard pictograms : 

Signal Word : Danger

Hazard Statements : H302 + H332 Harmful if swallowed or if inhaled.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.

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H412 Harmful to aquatic life with long lasting effects.

Precautionary Statements : **Prevention:**
 P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
 P264 Wash skin thoroughly after handling.
 P270 Do not eat, drink or smoke when using this product.
 P271 Use only outdoors or in a well-ventilated area.
 P272 Contaminated work clothing must not be allowed out of the workplace.
 P273 Avoid release to the environment.
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:
 P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.
 P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
 P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.
 P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.
 P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
 P363 Wash contaminated clothing before reuse.

Storage:
 P405 Store locked up.

Disposal:
 P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity:
 43.55 %

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous ingredients

Chemical Name	CAS-No.	Concentration (%)
Cyclohexanemethanamine, 5-amino-1,3,3-trimethyl-	2855-13-2	30 - 60
metaxylenediamine	1477-55-0	13 - 30
1-methylimidazole	616-47-7	3 - 7
1,6-Hexanediamine, C,C,C-trimethyl-	25620-58-0	0.1 - 1

SECTION 4. FIRST AID MEASURES

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- General advice : No hazards which require special first aid measures.
- If inhaled : Move to fresh air in case of accidental inhalation of dust or fumes from overheating or combustion.
If symptoms persist, call a physician.
- In case of skin contact : Take off contaminated clothing and shoes immediately.
Wash off with soap and plenty of water.
- In case of eye contact : Flush eyes with water as a precaution.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
- If swallowed : Clean mouth with water and drink afterwards plenty of water.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
- Most important symptoms and effects, both acute and delayed : None known.

SECTION 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Unsuitable extinguishing media : No data is available on the product itself.
- Specific extinguishing methods : No data is available on the product itself.
- Further information : Standard procedure for chemical fires.
- Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Not applicable for product as supplied.
- Environmental precautions : No special environmental precautions required.
- Methods and materials for containment and cleaning up : Wipe up with absorbent material (e.g. cloth, fleece).
Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

- Advice on protection against : Normal measures for preventive fire protection.

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fire and explosion

Advice on safe handling : For personal protection see section 8.
 No special handling advice required.

Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.

Materials to avoid : No special restrictions on storage with other products.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Ingredients with workplace control parameters**

Ingredients	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
metaxylenediamine	1477-55-0	C	0.1 mg/m ³	ACGIH
		C	0.1 mg/m ³	NIOSH REL
		C	0.1 mg/m ³	OSHA P0

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.

Hand protection
 Remarks : For prolonged or repeated contact use protective gloves.

Eye protection : Safety glasses

Skin and body protection : Protective suit

Hygiene measures : General industrial hygiene practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Color : amber, clear

Odor : No data is available on the product itself.

Odor Threshold : No data is available on the product itself.

pH : No data is available on the product itself.

Boiling point : > 204.44 °C

Flash point : > 121 °C
 Method: Pensky-Martens closed cup, closed cup

Evaporation rate : No data is available on the product itself.

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Flammability (solid, gas) : No data is available on the product itself.

Upper explosion limit : No data is available on the product itself.

Lower explosion limit : No data is available on the product itself.

Vapor pressure : No data is available on the product itself.

Relative vapor density : No data is available on the product itself.

Relative density : 1.04 - 1.06

Density : No data is available on the product itself.

Solubility(ies)

Water solubility : partly soluble

Solubility in other solvents : No data is available on the product itself.

Partition coefficient: n-octanol/water : No data is available on the product itself.

Autoignition temperature : No data is available on the product itself.

Thermal decomposition : No data is available on the product itself.

Viscosity : No data is available on the product itself.

Self-Accelerating decomposition temperature (SADT) : No data is available on the product itself.

SECTION 10. STABILITY AND REACTIVITY

Reactivity : Stable under recommended storage conditions.

Chemical stability : No decomposition if stored and applied as directed.

Possibility of hazardous reactions : No hazards to be specially mentioned.

Conditions to avoid : No data available

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : No data is available on the product itself.

Acute toxicity

Acute oral toxicity - Product : Acute toxicity estimate : 1,011 mg/kg
Method: Calculation method

Acute inhalation toxicity - Product : Acute toxicity estimate: 3.64 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Calculation method

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Acute dermal toxicity - Product : Acute toxicity estimate : 3,421 mg/kg
Method: Calculation method

Acute toxicity (other routes of administration) : No data available

Skin corrosion/irritation**Product:**

Remarks: According to the classification criteria of the European Union, the product is not considered as being a skin irritant.

Serious eye damage/eye irritation**Product:**

Remarks: According to the classification criteria of the European Union, the product is not considered as being an eye irritant.

Respiratory or skin sensitization**Product:**

Remarks: No data available

Assessment: No data available

Germ cell mutagenicity**Ingredients:**

metaxylenediamine:

Genotoxicity in vitro : Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative

Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative

1-methylimidazole:

Genotoxicity in vitro : Metabolic activation: with and without metabolic activation
Result: negative

Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative

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Ingredients:

metaxylenediamine:
Genotoxicity in vivo : Application Route: Oral
Method: OECD Test Guideline 474
Result: negative

Carcinogenicity

No data available

Carcinogenicity - Assessment : No data available

IARC

No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

OSHA

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity**Ingredients:**

metaxylenediamine:
Effects on fertility : Species: Rat, male and female
Application Route: Oral
Method: OECD Test Guideline 421

1-methylimidazole:

Species: Rat, male and female
Application Route: Oral
Method: OECD Test Guideline 422

1,6-Hexanediamine, C,C,C-trimethyl-:

Species: Rat, male and female
Application Route: Oral
Method: OECD Test Guideline 416

Ingredients:

Cyclohexanemethanamine, 5-amino-1,3,3-trimethyl-:
Effects on fetal development : Species: Rat, female
Application Route: Oral
General Toxicity Maternal: No-observed-effect level: 50 mg/kg
body weight
Method: OECD Test Guideline 414

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Result: No teratogenic effects.

1,6-Hexanediamine, C,C,C-trimethyl-:

Species: Rabbit, female
Application Route: Oral
General Toxicity Maternal: NOAEL (No observed adverse effect level): 50,000 ppm
Result: No teratogenic effects.

Reproductive toxicity - Assessment : No data available

STOT-single exposure

No data available

STOT-repeated exposure

No data available

Repeated dose toxicity**Ingredients:****Cyclohexanemethanamine, 5-amino-1,3,3-trimethyl-:**

Species: Rat, male and female
NOEC: 60 mg/kg, 200 mg/m³
Application Route: Ingestion
Test atmosphere: dust/mist
Exposure time: 216 h
Number of exposures: 6 h
Method: Subchronic toxicity

metaxylenediamine:

Species: Rat, male and female
No-observed-effect level: 150 mg/kg
Application Route: Ingestion
Exposure time: 672 h
Number of exposures: 7 d
Method: Subacute toxicity

1-methylimidazole:

Species: Rat, male and female
NOAEL (No observed adverse effect level): 30 mg/kg/d
Application Route: Ingestion
Number of exposures: 7 d
Method: Subacute toxicity

1,6-Hexanediamine, C,C,C-trimethyl-:

Species: Rat, male and female
NOAEL (No observed adverse effect level): 10 mg/kg
Application Route: Ingestion
Exposure time: 13 Weeks
Method: Subchronic toxicity

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Repeated dose toxicity - Assessment : No data available

Aspiration toxicity

No data available

Experience with human exposure

General Information: No data available

Inhalation: No data available

Skin contact: No data available

Eye contact: No data available

Ingestion: No data available

Toxicology, Metabolism, Distribution

No data available

Neurological effects

No data available

Further information**Product:**

Remarks: No data available

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Ingredients:**

Cyclohexanemethanamine, 5-amino-1,3,3-trimethyl-:

Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): 110 mg/l
Exposure time: 96 h
Test Type: semi-static test
Test substance: Fresh water
Method: Directive 67/548/EEC, Annex V, C.1.

metaxylenediamine:

Toxicity to fish : LC50 (Oryzias latipes (Orange-red killifish)): 87.6 mg/l
Exposure time: 96 h
Test Type: semi-static test
Test substance: Fresh water
Method: OECD Test Guideline 203

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1-methylimidazole:
Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): > 100 - < 215 mg/l
Exposure time: 96 h
Test Type: static test
Test substance: Fresh water
Method: DIN 38412

Ingredients:

Cyclohexanemethanamine, 5-amino-1,3,3-trimethyl-:
Toxicity to daphnia and other aquatic invertebrates : EC50: 23 mg/l
Exposure time: 48 h
Test Type: static test
Test substance: Fresh water
Method: OECD Test Guideline 202

metaxylenediamine:
Toxicity to daphnia and other aquatic invertebrates : EC50: 15.2 mg/l
Exposure time: 48 h
Test Type: static test
Test substance: Fresh water
Method: OECD Test Guideline 202

1-methylimidazole:
Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 267.9 mg/l
Exposure time: 48 h
Test Type: static test
Test substance: Fresh water
Method: Directive 67/548/EEC, Annex V, C.2.

Ingredients:

Cyclohexanemethanamine, 5-amino-1,3,3-trimethyl-:
Toxicity to algae : EC50: 37 mg/l
Exposure time: 72 h
Test Type: static test
Test substance: Fresh water
Method: Directive 67/548/EEC, Annex V, C.3.

metaxylenediamine:
Toxicity to algae : ErC50 (Selenastrum capricornutum (green algae)): 32.1 mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201

1-methylimidazole:
Toxicity to algae : ErC50 (Desmodesmus subspicatus (Scenedesmus subspicatus)): 180.7 mg/l
Exposure time: 72 h
Test Type: static test
Test substance: Fresh water
Method: OECD Test Guideline 201

1,6-Hexanediamine, C,C,C-trimethyl-:
Toxicity to algae : EgC50 (Desmodesmus subspicatus (Scenedesmus subspicatus)): 29.5 mg/l

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Exposure time: 72 h

M-Factor (Acute aquatic toxicity) : No data available

Toxicity to fish (Chronic toxicity) : No data available

Ingredients:

metaxylenediamine:

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 4.7 mg/l
 Exposure time: 21 d
 Test Type: semi-static test
 Test substance: Fresh water
 Method: OECD Test Guideline 211

M-Factor (Chronic aquatic toxicity) : No data available

Ingredients:

Cyclohexanemethanamine, 5-amino-1,3,3-trimethyl-:

Toxicity to bacteria : EC10: 1,120 mg/l
 Exposure time: 18 h
 Method: Measured

: (Pseudomonas putida): 1,120 mg/l
 Exposure time: 18 h
 Test Type: static test
 Test substance: Fresh water

metaxylenediamine:

Toxicity to bacteria : EC50 (activated sludge): > 1,000 mg/l
 Exposure time: 0.5 h
 Test Type: static test
 Method: OECD Test Guideline 209

1-methylimidazole:

Toxicity to bacteria : EC50 (activated sludge): 1,050 mg/l
 Exposure time: 7 h
 Method: DIN 38 412 Part 8

1,6-Hexanediamine, C,C,C-trimethyl-:

Toxicity to bacteria : IC50 (Pseudomonas putida): 89 mg/l
 Exposure time: 17 h

Toxicity to soil dwelling organisms : No data available

Plant toxicity : No data available

Sediment toxicity : No data available

Toxicity to terrestrial organisms : No data available

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Ecotoxicology Assessment
Acute aquatic toxicity : No data available

Chronic aquatic toxicity : No data available

Toxicity Data on Soil : No data available

Other organisms relevant to the environment : No data available

Further information

The following percentage of the mixture consists of ingredient(s) with unknown hazards to the aquatic environment: 43.55 %

Persistence and degradability**Ingredients:**

Cyclohexanemethanamine, 5-amino-1,3,3-trimethyl-:

Biodegradability : Inoculum: activated sludge
Concentration: 6.9 mg/l
Result: Not readily biodegradable.
Biodegradation: 8 %
Exposure time: 28 d
Method: Directive 67/548/EEC Annex V, C.4.A.

metaxylenediamine:

Biodegradability : Inoculum: activated sludge
Concentration: 14.2 mg/l
Result: Not readily biodegradable.
Biodegradation: 49 %
Exposure time: 28 d
Method: OECD Test Guideline 301B

1-methylimidazole:

Biodegradability : Inoculum: activated sludge
Result: Not readily biodegradable.
Biodegradation: 0 - 10 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

Inoculum: activated sludge
Concentration: 9,000 mg/l
Result: Inherently biodegradable.
Biodegradation: 79 %
Exposure time: 60 d
Method: ISO Method, other

1,6-Hexanediamine, C,C,C-trimethyl-:

Biodegradability : Inoculum: activated sludge
Concentration: 11.4 mg/l
Result: Not readily biodegradable.
Biodegradation: 7 %
Exposure time: 28 d

Biochemical Oxygen Demand (BOD) : No data available

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Chemical Oxygen Demand (COD) : No data available

BOD/COD : No data available

ThOD : No data available

BOD/ThOD : No data available

Dissolved organic carbon (DOC) : No data available

Physico-chemical removability : No data available

Stability in water : No data available

Photodegradation : No data available

Impact on Sewage Treatment : No data available

Bioaccumulative potential**Ingredients:**

metaxylenediamine:
Bioaccumulation : Species: *Cyprinus carpio* (Carp)
Bioconcentration factor (BCF): < 0.3
Remarks: Does not bioaccumulate.

Ingredients:

Cyclohexanemethanamine, 5-amino-1,3,3-trimethyl-:
Partition coefficient: n-octanol/water : log Pow: 0.99 (23 °C)
pH: 6.34
Method: OECD Test Guideline 107

metaxylenediamine:
Partition coefficient: n-octanol/water : log Pow: 0.18 (25 °C)
pH: 10.3 - 10.4
Method: OECD Test Guideline 107

1-methylimidazole:
Partition coefficient: n-octanol/water : log Pow: -0.19 (25 °C)
pH: 9.25 - 9.85
Method: OECD Test Guideline 107

1,6-Hexanediamine, C,C,C-trimethyl-:
Partition coefficient: n-octanol/water : log Pow: 0.77 (23 °C)
Method: OECD Test Guideline 107

Mobility in soil

Mobility : No data available

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Ingredients:

Cyclohexanemethanamine, 5-amino-1,3,3-trimethyl-:

Distribution among : Koc: 928.

environmental compartments

1-methylimidazole:

Distribution among : Koc: 27. Method: Calculation method

environmental compartments

Stability in soil : No data available

Other adverse effectsEnvironmental fate and : No data available
pathwaysResults of PBT and vPvB : No data available
assessmentEndocrine disrupting : No data available
potentialAdsorbed organic bound : No data available
halogens (AOX)**Hazardous to the ozone layer**Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82
Protection of Stratospheric Ozone - CAA Section 602 Class I
Substances
Remarks: This product neither contains, nor was
manufactured with a Class I or Class II ODS as defined by the
U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A +
B).

Additional ecological : There is no data available for this product.

information - Product

Global warming potential : No data available
(GWP)**SECTION 13. DISPOSAL CONSIDERATIONS****Disposal methods**Waste from residues : Offer surplus and non-recyclable solutions to a licensed
disposal company.Contaminated packaging : Empty remaining contents.
Empty containers should be taken to an approved waste
handling site for recycling or disposal.**SECTION 14. TRANSPORT INFORMATION****International Regulation**

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IATA

UN/ID No. : UN 2735
Proper shipping name : Polyamines, liquid, corrosive, n.o.s.
(ISOPHORONE DIAMINE, M-XYLYLENE DIAMINE)
Class : 8
Packing group : II
Labels : Corrosive
Packing instruction (cargo aircraft) : 855
Packing instruction (passenger aircraft) : 851

IMDG

UN number : UN 2735
Proper shipping name : POLYAMINES, LIQUID, CORROSIVE, N.O.S.
(ISOPHORONE DIAMINE, M-XYLYLENE DIAMINE)
Class : 8
Packing group : II
Labels : 8
EmS Code : F-A, S-B
Marine pollutant : no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Domestic regulation**DOT Classification**

UN/ID/NA number : UN 2735
Proper shipping name : POLYAMINES, LIQUID, CORROSIVE, N.O.S.
(ISOPHORONE DIAMINE, M-XYLYLENE DIAMINE)
Class : 8
Packing group : II
Labels : CORROSIVE
ERG Code : 153
Marine pollutant : no

SECTION 15. REGULATORY INFORMATION

TSCA - 5(a) Significant New Use Rule List of Chemicals : Not relevant

EPCRA - Emergency Planning and Community Right-to-Know

SARA 311/312 Hazards : No SARA Hazards

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

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Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM Intermediate or Final VOC's (40 CFR 60.489).

Pennsylvania Right To Know

1,3-Benzenedimethanamine, polymer with 2,2'-[(1-methylethylidene)bis(4,1- phenyleneoxymethylene)]bis[oxirane] and 2,2,4-trimethyl-1,6	68738-77-2	30 - 50 %
Cyclohexanemethanamine, 5-amino-1,3,3- trimethyl-	2855-13-2	30 - 50 %
metaxylenediamine	1477-55-0	20 - 30 %
1-methylimidazole	616-47-7	1 - 5 %

California Prop 65

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

The ingredients of this product are reported in the following inventories:

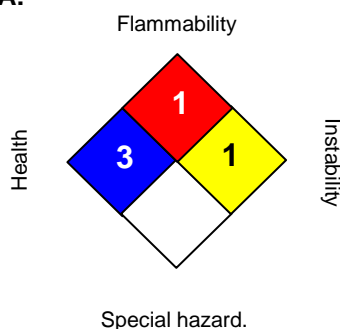
CH INV	: The mixture contains substances listed on the Swiss Inventory
TSCA	: On TSCA Inventory
DSL	: All components of this product are on the Canadian DSL.
AICS	: Not in compliance with the inventory
NZIoC	: Not in compliance with the inventory
ENCS	: On the inventory, or in compliance with the inventory
ISHL	: On the inventory, or in compliance with the inventory
KECI	: On the inventory, or in compliance with the inventory
PICCS	: On the inventory, or in compliance with the inventory
IECSC	: On the inventory, or in compliance with the inventory

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

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SECTION 16. OTHER INFORMATION**Further information****NFPA:****HMIS III:**

HEALTH	3
FLAMMABILITY	1
PHYSICAL HAZARD	1

0 = not significant, 1 =Slight,

2 = Moderate, 3 = High

4 = Extreme, * = Chronic

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While the information and recommendations in this publication are to the best of our knowledge, information and belief accurate at the date of publication, NOTHING HEREIN IS TO BE CONSTRUED AS A WARRANTY, EXPRESS OR OTHERWISE.

IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICABILITY OF SUCH INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF ANY PRODUCT FOR ITS OWN PARTICULAR PURPOSE. THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behaviour should be determined by the user and made known to handlers, processors and end users.

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