Safety Data Sheet

Product Name:	XTR-311 Epoxy Adhesive Part A (Resin)
SDS Date:	01/10/2016

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name:	XTR-311 Part A (Resin)
Manufacturer:	His Glassworks, Inc. 2000 Riverside Drive Suite 19 Asheville NC 28804 828-254-2559
Emergency Phone number:	ChemTel, Inc. Toll Free: 800-255-3924 International: +813-248-0585

2. HAZARDS IDENTIFICATION

Classification of Substance	Serious Eye Damage/ Eye Irritant- Category 2B Skin Sensitization - Category 1

GHS Labels

Warning

Hazard Statements

H320 Causes eye irritation
H317 May cause an allergic skin reaction

Precautionary Statements

General
Not applicable

Prevention
Wear protective gloves
Wear eye or face protection
Avoid breathing vapor
Wash hands throughly after handling
Contaminated work clothing should not be allowed out of workplace

Response
IF ON SKIN
Wash with plenty of soap and water
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

Storage
Not applicable

Disposal
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

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Component	CAS#	Concentration
Cyclohexanol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chrlormethyl)oxirane	30583-72-3	100%

There are no additional ingredients present, which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.
Occupational exposure limits, if available, are listed in Section 8

4. FIRST AID MEASURES

Inhalation:	Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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.
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.
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. If irritation persists, get medical attention.
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 lows 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.
Notes to Physician	
	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	No specific treatment

Protection of first air personnel	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth to mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:	Use an extinguishing agent suitable for the surrounding fire.
Extinguishing media which shall not be used for safety reasons:	None known
Specific hazards during fire fighting:	In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous thermal decomposition products	Decomposition products may include the following materials: carbon monoxide carbon dioxide aldehydes
Special protective action 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.

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 specialized clothing is require dot deal with the spillage, take not of any information in Section 8 on suitable and unsuitable materials. See also the information own “For non-emergency personnel”
Environmental precautions	Avoid dispersal of spills material and runoff and contact with soil, waterways, trains and sewers. Inform the relevant authorities if the product has caused environmental pollution(sewers, waterways, soil, or air).

Methods and materials for containment and cleaning up

Small spill	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in a appropriate waste disposal container. Dispose of via licensed waste disposal contractor.
Large spill	Stop leak if without risk. Move containers form spill area. Approach release from up wind. Prevent entry into sewers, water courses, basement or confined areas. Wash spillages into an effluent treatment platen or proceed as follows. Contain and collect spillage with non-combusitble, absorbent material, eg sand, earth, vermiculite, or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licenses waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spill dproduct. Note: See section 1 of SDS for emergency contact information and section 13 of SDS for waste disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Protective measures	Put on appropriate personal protective equipment (see Section 8 of SDS). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material., kept tightly closed and 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 of SDS) 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 to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Occupational Exposure Limits	None.
Appropriate engineering controls	No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
Environmental exposure controls	Emissions from ventilation or work process equipment should be check 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	
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 and 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 indicate 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 rich assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use 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 tie of the glove cannot be accurately estimated.
Body protection	Perusal 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 measure should be selected based on the tasks being performed and the risks involved and should be approved by a specialist before handing the product.
Respiratory protection	Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicate this is necessary. Respirator selections must be based on known or anticipated exposure levels, the hazards of the product and the safe working limes of the selected respirator.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form:	Viscous liquid
Color:	Colorless
Odor:	Odorless
Specific gravity:	1.09
Melting point/range:	10ºC (50º F)
Flash point:	Typical 115º C (239º F)

Relative vapor density:	>1 (Air = 1.0)
Water solubility:	Negligible
Viscosity, dynamic:	1.8-2.5 Pas at 25º C (77º F) ASTM D-445

10. STABILITY AND REACTIVITY

Reactivity	Stable under normal conditions.
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	Strong oxidizer, caustic soda (sodium hydroxide) and induce vigorous polymerization at temperatures around 200ºC
Incompatible materials	strong oxidizing agents sodium hydroxide
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should be be produced

11. TOXICOLOGICAL INFORMATION

Acute toxicity	Not available
Irritation/Corrosion	Not available
Sensitization	Not available
Mutagenicity	Not available
Carcinogenicity	Not available
Reproductive toxicity	Not available
Teratogenicity	Not available
Specific target organ toxicity	Not available
Aspiration hazard	Not available
Information on the likely routes of exposure	Not available

Potential acute health effects

Eye contact	Causes eye irritation
Inhalation	No known significant effects or critical hazards
Skin contact	May cause an allergic skin reaction
Ingestion	May be irritating to mouth, throat and stomach

Symptoms related to the physical, chemical, and toxicological characteristics

Eye contact	Adverse symptoms may include the following: irritation watering redness
Inhalation	No specific data
Skin contact	Adverse symptoms may include the following: irritation redness
Ingestion	No specific data

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects	Not available
Potential delayed effects	Not available

Long term expsoure

Potential immediate effects	Not available
Potential delayed effects	Not available
Potential chronic health effects	Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

12. ECOLOGICAL INFORMATION

Toxicity	Not available
Persistence/degradabiltiy	Not available

Mobility in soil	No known significant effects or critical hazards

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 requirement of environmental protection and waste disposal legislation and any regional local authority requirement. Dispose of surplus and non-recyclable products via a license 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 container or liners may retain some product residues. Avoid dispersal of spill material and runoff and contact with soil, waterway, drains, and sewers.

14. TRANSPORT INFORMATION

The data provided in this section is for information only and may no 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.

DOT Classification	Not regulated for transport
IATA Classification	Not regulated for transport
IMO/IMDG	Not regulated for transport

15. REGULATORY INFORMATION

US Federal regulations	TSCA 12(b)- Chemical export notification- None required TSCA 5(a)2 - Final significant new use rules: Not listed TSCA 5(a)2 - Proposed significant new rules: Not listed TSCA 5(e) - Substance consent order: Not listed

California Prop 65	None required
United States TSCA 8b	All components are listed or exempted
WHMIS (Canada)	Class D-2B: Material causing other toxic effects (Toxic)
Canadian NPRI	None required
CEPA Toxic substances	None required

16. OTHER INFORMATION

	HMIS III
Health:	2
Flammability	1
Reactivity:	0
Personal Protection	0

Safety Data Sheet

Product Name:	XTR-311 Epoxy Adhesive Part B (Hardener)
SDS Date:	01/12/16

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name:	XTR-311 Part B (Hardener)
Manufacturer:	His Glassworks, Inc. 2000 Riverside Drive Suite 19 Asheville NC 28804 828-254-2559
Emergency Phone number:	ChemTel, Inc. Toll Free: 800-255-3924 International: +813-248-0585

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture
Acute toxicity, oral - Category 4
Skin Irritation - Category 2
Eye Irritation - Category 2
Acute aquatic toxicity - Category 3

(Hazard Pictograms):


GHS05


GHS07


GHS08

H302 Harmful if swallowed
H315 Causes skin irritation
H319 Causes serious eye irritation
H402 Harmful to aquatic life

P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children
P103 Read label before use
P264 Wash skin thoroughly after handling
P270 Do not eat, drink or smoke when using this product
P302 + P352 If on skin: Wash with plenty of soap and water
P305 + P351 + P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333 + P313 If skin irritation or rash occurs, get medical attention
P337 + P313 If eye irritation persists, get medical attention
P362 + P364 Take off contaminated clothing and wash it before reuse
P501 Dispose of contents/container according to local, state, national and international regulations

Hazards not otherwise classified (HNOC): None known

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Component	CAS#	Concentration
TETA, reaction products with propylene oxide	269850-63-0	>50%
Triethylenetetramine (TETA)	112-24-3	<17%
Trimethylolpropane polyoxypropylene triamine	39423-51-3	20% – 33%

4. FIRST AID MEASURES

Inhalation	Remove sources of contamination and move victim to fresh air. If breathing has stopped, give artificial respiration, then oxygen if needed. Contact physician immediately
Skin Contact	In case of skin contact, wash thoroughly with soap and water.
Eye Contact	Flush eyes with plenty of water. If irritation persists, seek medical attention.
Ingestion	Do not induce vomiting unless instructed by a physician. Never give anything by mouth to an unconscious person.

5. FIRE-FIGHTING MEASURES

Flammable Classification	Non-flammable
Extinguishing media	Water fog, Dry chemical and carbon dioxide foam
Unusual Fire or Explosion Hazards	Non known
Fire fighting instructions	Use water spray to cool fire-exposed surfaces and to protect personnel. Shut off “fuel” to fire. If a leak or spill has not ignited, use water spray to disperse the vapors. Either allow fire to burn under controlled conditions or extinguish with foam or dry chemical. Try to cover liquid spills with foam.
Further information	Because fire may produce toxic thermal decomposition products, wear a self contained breathing apparatus (SCBA) with a full face piece operated in pressure demand or positive-pressure mode.

6. ACCIDENTAL RELEASE MEASURES

Spill/ Leak procedures	Only properly protected personnel should remain in the spill area; dike and contain spill; absorb or scrape up excess into suitable container for disposal; wash area with dilute ammonia solution. Stop or reduce discharge if it can be done safely.

Environmental precautions: Prevent further leakage or spillage

7. HANDLING AND STORAGE

Handling precautions	Ensure good ventilation at the workplace. Use good general housekeeping procedures. Wash hands after use.
Storage requirements	Ensure Keep containers tightly closed and properly labelled. Store in a cool, dry, well ventilated place away from heat, direct sunlight, strong oxidizers and any incompatibles. Store in approved containers and protect against physical damage. Keep containers securely sealed when not in use. Indoor storage should meet OSHA standards and appropriate fire codes. Containers that have been opened must be carefully resealed to prevent leakage. Empty containers retain residue and may be dangerous. Avoid water contamination.good ventilation/exhaustion at the workplace Prevent formation or aerosols

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Respiratory Protection	Respiratory protection is not normally required when using this product with adequate ventilation. Should a respirator be needed, follow OSHA respirator regulation 29CFR 1910.134 and European Standards EN 141, 143, and 371; wear an NIOSH approved respirator equipped with organic vapor cartridges.
Hand protection	Wear chemical resistant, liquid tight gloves such as butyl rubber, neoprene or PVC
Eye protection	Safety glasses with shields per OSHA eye and face protection regulations 29CFR 1910.133. Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of, or in conjunction with, contact lenses.
Other protective equipment	Additional protective clothing or equipment is not normally required. Provide eye bath and safety shower.
Comments	Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics. Wash thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form:	clear liquid
Color:	Colorless
Odor:	mild ammonia
pH:	NA
Water solubility:	not available
Boiling point/range:	no available
Flash point:	347ºF
Relative vapor density:	>1 (Air = 1.0)
Vapor pressure:	<1.0mmHg @ 70ºF
Specific Gravity:	1.01
Viscosity, dynamic:	not available
Auto igniting	Product is not self igniting
Danger of explosion	Product does not present an explosion hazard

10. STABILITY AND REACTIVITY

Reactivity	No further relevant information available
Chemical stability	Stable under normal conditions
Thermal decomposition/ conditions to be avoided	No decomposition if used according to specifications
Possibility of hazardous reactions	No dangerous reactions known
Conditions to avoid	No further relevant information available
Incompatible materials	No further relevant information available
Hazardous decomposition products	No dangerous decomposition products known

11. TOXICOLOGICAL INFORMATION

Skin corrosion	No data
Serious eye irritation	no data
Carcinogenicity	no data
Reproductive toxicity	no data
On the eye	Strong irritant with the danger of severe eye injury Corrosive effect Causes serious eye irritation

12. ECOLOGICAL INFORMATION

Toxicity:

EC50 Daphnia sp	49 mg/l (48 h, static)
EC50 Algae	17 mg/l (72 h, static)
LC50 Fish	380 mg/l (96 h, static)
NOEC Algae	3.77 mg/l (72 h, static)
Persistence and Degradability	no data

13. DISPOSAL CONSIDERATIONS

Waste treatment methods:

Recommendation

Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Observe all federal, state and local environmental regulations when disposing of this material

Uncleaned packagings

Recommendation

Disposal must be made according to official regulations

14. TRANSPORT INFORMATION

DOT Classification:

Proper shipping name:	Amines, corrosive liquids, n.o.s. (ALKYL ETHER AMINE)
Class:	8
UN ID#:	2735
Packing Group:	III

IATA Classification:

Proper shipping name:	Amines, corrosive liquids, n.o.s. (ALKYL ETHER AMINE)
Class:	8
UN ID#:	2735
Packing Group:	III

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture:

TSCA Inventory Status	All components of this formulation are listed in the TSCA Inventory
California Proposition 65	This product does not intentionally contain any chemicals which have been identified by the state of California to cause cancer, birth defects or other reproductive harm.

16. OTHER INFORMATION

The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create warranty, expressed or implied, and shall not establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of this information and the suitability of the material or product for any particular purpose.