GATEWAY COMPOSITES | SAFETY DATA SHEET CARBON FIBER 2017

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Gateway Composites Carbon Fiber Other Names: Unidirectional fabric, woven fabric, bi-directional fabric, milled, chopped fiber Product Type: 3k, 6k, 12k, 24k, 48k, 50k Address: 120 East Highway A, Wentzville, MO 63385 Telephone Number: 636-887-0637 Emergency Telephone Number: 636-887-0637 Chemtel 800-255-3924

2. HAZARDS IDENTIFICATION

This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). This SDS contains valuable information critical to the safe handling and proper use of the product.

- 2.1 Primary Route of Exposure
- 2.1.1 Skin Contact Fiber dust may cause irritation, itchiness or sometimes allergic dermatitis.
- 2.1.2 Eye Contact Fiber or Fiber Dust may cause irritation or injury from scratching.
- 2.1.3 Inhalation Dust may cause irritation. 2.1.4 Ingestion Unknown
- 2.2 Chronic Toxicity/Carcinogenicity Not Listed
- 2.3 Medical Conditions Aggravated by Exposure Not Applicable
- 2.4 Signal word: No signal word.
- 2.5 Precautionary Statement: Possible irritant to the skin, eyes, and respiratory tract when processed due to nuisance dust generation. Fiber is electrically conductive.

See Section 10 for additional information. In the supplied form the product is not explosive however, the processing and buildup of fine dust can lead to a risk of dust explosion. Warning: processing may create combustible dust concentrations in the air. No specific hazards known.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component Concentration CAS Number Carbon Fiber (Polyacrylonitrile based) 95 ~ 100 % 7440-44-0 Epoxy (Sizing agent) 0.5 ~ 2.0 % Trade Secret

4. FIRST AID MEASURES

4.1 Skin Wash with water and if irritation persists or allergic reaction occurs, consult a medical physician.



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- 4.2 Eye Wash with plenty of clean water and, if irritation persists, consult a medical physician.
- 4.3 Inhalation Evacuate from the dusty contaminated area and walk outside to get fresh air.
- 4.4 Ingestion Consult a medical physician.
- 4.5 Notes to Physician Fiber is inert, but it is so sharp and strong that it may cause physical injury.

5. FIRE-FIGHTING MEASURES

- 5.1 Flammable Properties
- 5.1.1 Flash Point Not Applicable
- 5.1.2 Flammable Limits LFL (Lower Flush Limit) Not Applicable UFL (Upper Flush Limit) Not Applicable
- 5.2 Firefighting Instruction Not Applicable

6. ACCIDENTAL RELEASE MEASURES

- 6.1 Aquatic Toxicity Unknown
- 6.2 Steps to be Taken if Material is Released or Spilled Vacuum up and place in a waste disposal container to an approved landfill.
- 6.3 Neutralizing Chemicals Not Applicable

7. HANDLING AND STORAGE

- 7.1 Precautions to be taken in Handling & Storing
 Airborne fiber dust and broken filaments should be controlled as to minimize
 (1) Skin irritation, (2) Electrical malfunction to machinery, electronics, etc. due
 to fiber electrical conductivity. Maintain good housekeeping to control dust
 accumulations.
- 7.2 Other Precautions Isolate all electrical equipment in surrounding areas where fiber is handled or used. Any contact between airborne particles and filaments may cause electrical shorts on any electrical equipment.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

- 8.1 Ventilation Requirements Local exhaust for fiber dust only
- 8.2 Personal Protective Equipment Eye/Face Protection Safety Goggles and Dust Mask Skin Protection Protective clothing (Rubber Gloves) which can cover full body Respiratory Protection Dust Masks



120 East Hwy A Wentzville MO 63385 636.887.0637

9. PHYSICAL & CHEMICAL PROPERTIES

Appearance	Filament
Odor	Odorless
Density (g/cm3)	1.8
Color	Black
Boiling Point	N/A
Vapor Pressure	N/A
Melting Point	N/A
Solubility (%)	
Vapor Density	N/A in water Insoluble
Volatility	N/A in others N/A

10. PHYSICAL HAZARDS (STABILITY & REACTIVITY)

Chemical Stability	Stable
Conditions to Avoid	Strong oxidizing agents.
	Accumulation of fine dust may entail
	the risk of a dust explosion in
	the presence of air. The fine dust from a carbon
	fiber compound or composite that is cut or
	formed can create additional dust explosion risk
	depending on the resin or compounding agent.
	A process hazard analysis is recommended to
	determine what, if any, risks are present.
Incompatibilities	None
Hazardous Polymerizatio	on Will not occur
Hazardous Decompositio	

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity: Not determined Acute dermal toxicity: Irritant Acute inhalation toxicity: Irritant Irritation/Corrosion: Skin: Mechanical skin irritation Eyes: Not determined Sensitization: Not determined Sub-acute toxicity: Not determined Chronic toxicity: Not determined Mutagenicity: Not determined Carcinogenicity: Not determined Reproductive toxicity: Not determined Experiences made in practice: Fiber abrasion can cause mechanical skin irritation.



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12. ECOLOGICAL INFORMATION

Biodegradability Not biodegradable Bioaccumulation Unknown Aqua Toxicity Unknown

13. DISPOSAL CONSIDERATION

Waste Disposal Method Dispose fiber in accordance with applicable governmental non-hazardous solid waste regulations.

14. TRANSPORT INFORMATION

Classification according to DOT: Non Hazardous Classification according to DOT: Not classified as "Dangerous Goods" Classification according to DOT: Not classified as "Dangerous Goods"

15. REGULATORY INFORMATION

This product is not classified as a toxic chemical or hazardous material. No special warning label is required.

TSCA (US) NO CARBON FIBER 7440-44-0 EINECS NO N/A WHMIS (Canada) N/A CAS 7440-44-0 OSHA N/A SARA TITLE III Sec.313 Toxic Chemicals None

16. OTHER INFORMATION

This information is furnished without warranty, express or implied, except that it is accurate to the best knowledge of Gateway Composites LLC. It relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process. Gateway Composites LLC assumes no legal responsibility for use of or reliance upon this data.



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GATEWAY COMPOSITES | SAFETY DATA SHEET 747 EPOXY RESIN

SECTION 1: CHEMICAL PRODUCT & COMPANY IDENTIFICATION

Product:Gateway Composites 747 Epoxy ResinProduct Code:747 Epoxy ResinHMIS Ratings:Health 2, Fire 1, Reactivity 0SDS Number:SDS747ER Date Printed: 01/31/16

Gateway Composites, 120 East Highway A, Wentzville, MO 63385 Customer Information Center: 636-887-0637 Emer. # 636-887-0637 or CHEMTEL 800-255-3924

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

Reaction product of epichlorohydrin & bisphenol A

SECTION 3: HAZARDS IDENTIFICATION

CAS# 025085-99-8 94% Trade secret 6% Colorless to slight yellow liquid. Epoxy odor. May cause allergic skin reaction.

POTENTIAL HEALTH EFFECTS (See Section 11 for toxicological data.)

EYE: May cause slight transient (temporary) eye irritation. Corneal injury is unlikely.

SKIN: Prolonged exposure not likely to cause significant skin irritation. Repeated exposure may cause skin irritation. Has caused allergic skin reaction in humans. A single prolonged exposure is not likely to result in the material being absorbed through skin in harmful amounts.

INGESTION: Single dose oral toxicity is considered to be extremely low. No hazards anticipated from swallowing small amounts incidental to normal handling operations.

INHALATION: Vapors are unlikely due to physical properties.

SYSTEMIC (OTHER TARGET ORGAN) EFFECTS: Except for skin sensitization,



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repeated exposures to low molecular weight epoxy resins of this type are not anticipated to cause any significant adverse effects.

CANCER INFORMATION: Many studies have been conducted to assess the potential carcinogenicity of diglycidyl ether of bisphenol A (DGEBPA). Although some weak evidence of carcinogenicity has been reported in animals, when all of the data are considered, the weight of evidence does not show that DGEBPA is carcinogenic. Indeed, the most recent review of the available data by the International Agency for Research on Cancer (IARC) has concluded that DGEBPA is not classified as a carcinogen.

TERATOLOGY (BIRTH DEFECTS): DGEBPA did not cause birth defects or other adverse effects on the fetus when pregnant rabbits were exposed by skin contact, the most likely route of exposure, or when pregnant rats or rabbits were exposed orally.

REPRODUCTIVE EFFECTS: In animal studies, has been shown not to interfere with reproduction.

SECTION 4: FIRST AID

EYES:	Flush eyes with plenty of water.
SKIN:	Wash off in flowing water or shower.
INGESTION:	No adverse effects anticipated by this route of exposure
	incidental to proper industrial handling.
IN ULA LATION	

INHALATION: No adverse effects anticipated by this route of exposure. NOTE TO PHYSICIAN: No specific antidote. Supportive care. Treatment based on judgment of the physician in response to reactions of the patient.

SECTION 5: FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES:FLASH POINT:485F, 252CMETHOD USED:ASTM D93, PMCCAUTOIGNITION TEMPERATURE: Not applicableFLAMMABILITY LIMITSLFL:Not applicableUFL:Not applicable



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HAZARDOUS COMBUSTION PRODUCTS:

Under fire conditions polymers decompose. The smoke may contain polymer fragments of varying compositions in addition to unidentified toxic and/or irritating compounds. Hazardous combustion products may include and are not limited to phenolics, carbon monoxide and carbon dioxide.

OTHER FLAMMABILITY INFORMATION:

Container may rupture from gas generation in a fire situation. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. Dense smoke is emitted when burned without sufficient oxygen.

EXTINGUISHING MEDIA:

Water fog or fine spray, carbon dioxide, dry chemical, foam. Do not use direct water stream. May spread fire. Alcohol resistant foams (ATC type) are preferred if available. General purpose synthetic foams (including AFFF) or protein foams may function, but much less effectively. Water fog, applied gently may be used as a blanket for fire extinguishment.

FIRE FIGHTING INSTRUCTIONS:

Keep people away. Isolate fire area and deny unnecessary entry. Do not use direct water stream. May spread fire. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of re-ignition has passed. Move container from fire area if this is possible without hazard. Fight fire from protected location or safe distance. Consider use of unmanned hose holder or monitor nozzles. Immediately withdraw all personnel from area in case of rising sound from venting safety device or discoloration of the container. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Water fog, applied gently may be used as a blanket for fire extinguishment. Contain fire water run-off if possible. Fire water run-off, if not contained may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this MSDS.

PROTECTIVE EQUIPMENT FOR FIRE FIGHTERS:

Wear positive pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, pants, boots and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant clothing with SCBA. This will not provide sufficient fire protection. Consider fighting fire from a remote location. For protective equipment in post-fire or non-fire clean up situations, refer to the relevant sections.



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SECTION 6: ACCIDENTAL RELEASE MEASURES

PROTECT PEOPLE: Isolate area. Clear non-emergency personnel f rom area.

PROTECT THE ENVIRONMENT: Keep out of irrigation ditches, sewers and water supplies.

CLEANUP: Absorb with material such as sand, or polypropylene or polyethylene fiber products. Collect in suitable and properly labeled containers. Remove residual using hot soapy water. Residual can be removed with solvent. Solvents are not recommended for cleanup unless the recommended exposure guide-lines and safe handling practices for the specific solvent are followed. Consult appropriate solvent MSDS for handling information.

SECTION 7: HANDLING AND STORAGE

HANDLING: Avoid use of electric band heaters. Failures of electric band heaters have been reported to cause drums of liquid epoxy resin to explode and catch fire. Application of a direct flame to a container of liquid epoxy resin can also cause explosion and/or fire.

STORAGE: Recommended pumping and storage temperature is 60C (140F).

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS:	Good general ventilation should be sufficient for most conditions.
PERSONAL PROTECTIVE EQUIPM	/ENT
EYE/FACE PROTECTION:	Use safety glasses.
SKIN PROTECTION:	Use protective clothing impervious to this
	material. Selection of specific items such as
	faceshield, glove, boots, apron, or full-body suit will
	depend on operation. Remove contaminated
	clothing immediately, wash skin with soap and
	water, and launder clothing before reuse.
RESPIRATORY PROTECTION:	No respiratory protection should be needed.
EXPOSURE GUIDELINE(S):	None established.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: ODOR: VAPOR PRESSURE: VAPOR DENSITY: BOILING POINT:



Colorless to slight yellow liquid to semi-solid. Faint epoxy odor. Not applicable Not applicable Not applicable

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SOLUBILITY IN WATER: SPECIFIC GRAVITY: None 1.16

SECTION 10: STABILITY AND REACTIVITY

CHEMICAL STABILITY:

CONDITIONS TO AVOID:

Stable under recommended storage conditions. See Storage, Section 7.

Potentially violent decomposition can occur above 350C (662F). Generation of gas during decomposition can cause pressure in closed systems. Pressure build-up can be rapid.

INCOMPATIBILITY WITH OTHER MATERIALS:

Avoid contact with oxidizing materials, acids and bases. Avoid unintended contact with amines.

HAZARDOUS DECOMPOSITION PRODUCTS:

Hazardous decomposition products depend upon temperature, air supply and the presence of other materials. Uncontrolled exothermic reaction of epoxy resins release phenolics, carbon monoxide and water.

HAZARDOUS POLYMERIZATION:

Will not occur by itself. Masses of more than one pound

(0.5 kg) of product plus an aliphatic amine will cause irreversible polymerization with considerable heat build up.

SECTION 11: TOXICOLOGICAL INFORMATION

SKIN:The LD50 for skin absorption in rabbits is 20,000 mg/kg.INGESTION:The oral LD50 for rats is >5000 mg/kg.MUTAGENICITY (EFFECTS ON GENETIC MATERIAL):

Animal mutagenicity studies were negative. In vitro mutagenicity studies were negative in some in some cases and positive in others.

SECTION 12: ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE MOVEMENT & PARTITIONING:

Bioconcentration potential is moderate. (BCF between 100 and 3000 or Log Pow between 3 and 5). Potential for mobility in soil is low (Koc between 500 and 2000). Measured log octanol/water partition coefficient (log Pow) is 3.7-3.9. Soil organic carbon/water partition coefficient (Koc) is estimated to be 1800-4400. Henry's Law Constant (H) is estimated to be <6.94E-09 atm-m3/mole. Log octanol/water partition coefficient (log Pow) is 3.84.



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DEGRADATION & PERSISTENCE:

Theoretical oxygen demand (ThOD) is calculated to be 2.35 p/p. In the atmospheric environment, material is estimated to have a tropospheric half-life of 1.92 hr. Biodegradation reached in Modified Zahn-Wellens/EMPA Test (OECD Test No. 302B) after 28 days: 12%. 20-Day biochemical oxygen demand (BOD20) is <2.5%.

ECOTOXICOLOGY:

Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in most sensitive species). Acute LC50 for SDS747ER water flea Daphnia magna is 1.3 mg/L. Acute LC50 for fathead minnow (Pimephales promelas) is 3.1mg/L. Toxicity to aquatic species occurs at concentrations greater than water solubility. Maximum acceptable toxicant concentration (MATC) in water flea Daphnia magna is 0.55 mg/L. Growth inhibition threshold in bacteria is > 42.6 mg C/L. Inhibitory concentration (IC50) in OECD Activated Sludge Respiration Inhibition Test (OECD Test No. 209) is >100 mg/L.

SECTION 13: DISPOSAL CONSIDERATION

DISPOSAL:

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER.

All disposal methods must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.

GATEWAY COMPOSITES LLC HAS NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION 2 (Composition/Information On Ingredients). FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: recycler, reclaimer, incinerator or other thermal destruction device.

SECTION 14: TRANSPORT INFORMATION

Department of Transportation Classification: D.O.T. Proper Shipping Name: Other Requirements: Not Hazardous Not Regulated This product contains no toxic chemicals subject to the report requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (EPRCA) and of 40 CFR 372.



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The information contained herein is based on the data available to us and is believed to be correct. However, Gateway Composites LLC makes no warranty, expressed or implied, regarding the accuracy of these data or the results to be obtained from the use thereof. Gateway Composites LLC assumes no responsibility for injury from the use of the product described herein.

SECTION 15: REGULATORY INFORMATION

NOTICE: The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations. See other sections for health and safety information.

U.S. REGULATIONS SARA 313 INFORMATION: To the best of our knowledge, this product contains no chemical subject to SARA Title III Section 313 supplier notification requirements.

SARA HAZARD CATEGORY: This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

- An immediate health hazard
- This product has been classified as "an immediate heath hazard" due to the potential for allergic skin reaction.

TOXIC SUBSTANCES CONTROL ACT (TSCA):

All ingredients are on the TSCA inventory or are not required to be listed on the TSCA inventory.

STATE RIGHT-TO-KNOW: This product is not known to contain any substances subject to the disclosure requirements of

- New Jersey
- Pennsylvania

OSHA HAZARD COMMUNICATION STANDARD:

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.



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CANADIAN REGULATIONS REGULATORY INFORMATION

WHMIS INFORMATION: The Canadian Workplace Hazardous Materials

Information System (WHMIS) Classification for this product is:

D2B - skin sensitizer Refer elsewhere in the MSDS for specific warnings and safe handling information. Refer to the employer's workplace education program. CPR STATEMENT: This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

HAZARDOUS PRODUCTS ACT INFORMATION: This product contains the following ingredients which are Controlled Products and/or on the Ingredient Disclosure List (Canadian HPA section 13 and 14):

COMPONENTS: CAS # Reaction product of 025085-99-8 100% epichlorohydrin & bisphenol A

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA): All substances in this product are listed on the Canadian Domestic Substances List (DSL) or are not required to be listed.

SECTION 16: Other Information

References: Not available. Other Special Considerations: Not available. Created: 10/11/2005 Last Updated: 01/31/2016

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Gateway Composites LLC be liable for any claims, losses, or damages of any third party or for

lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Gateway Composites LLC has been advised of the possibility of such damages.



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GATEWAY COMPOSITES | SAFETY DATA SHEET 747 EPOXY HARDENER

SECTION I - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name:	Gateway Composites Epoxy Hardener/Curing Agent	
Product Code:	747 Epoxy Hardener	
Recommended Uses:	Coatings, Adhesives and Composites	
HMIS ratings:	HEALTH 3, FIRE 1 REACTIVITY 0	
SDS Number:	SDS747EH Date of Prep: 1/31/16	
Gateway Composites LLC, 120 East Highway A, Wentzville, MO 63385		
Product Type:	Amine Polymer Mixture Information: 636-887-0637	
24-Hr. Emergency Phone:	CHEMTEL 800-255-3924 OR 636-887-0637	

SECTION 2 -HAZARD(S) IDENTIFICATION

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200 Classification of the product

1910.1200 010351100101101	ine product	
Acute Tox	4 (oral) .	Acute toxicity
Acute Tox.	4 (dermal)	Acute toxicity
Skin Corr./Irrit.	1B	Skin corrosion/irritation
Eye Dam./Irrit.	1	Serious eye damage/eye irritation
Skin Sens.	1A	Skin sensitization
Aquatic Acute	3	Hazardous to the aquatic environment - acute
Aquatic Chronic	3	Hazardous to the aquatic environment - chronic
Label elements Pictogram: Signal Word: Danger		

Hazard Statement:

H312	Harmful in contact with skin.
H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H314	Causes severe skin burns and eye damage.
H402	Harmful to aquatic life.
H412	Harmful to aquatic life with long lasting effects.



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Precautionary Statements (Prevention):

P280	Wear protective gloves/protective
	clothing/eye protection/face protection.
P260	Do not breathe dust or mist.
P273	Avoid release to the environment.
P272	Contaminated work clothing should not be allowed out of the workplace.
P270	Do not eat, drink or smoke when using this product.
P264	Wash with plenty of water and soap thoroughly after handling.

Precautionary Statements (Response):

P310	Immediately call a POISON CENTER or doctor/physician
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several/ minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P303 + P361 + P353	
IF ON SKIN (or hair):	Take off immediately all contaminated clothing.
	Rinse skin with water/shower.
P304 + P340	
IF INHALED:	Remove person to fresh air and keep comfortable for breathing.
P301 + P330 + P331	
IF SWALLOWED:	rinse mouth. Do NOT induce vomiting.
P361 + P364	Take off immediately all contaminated clothing and wash it before reuse.

Precautionary Statements (Storage):P405Store locked up.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT WT% CAS#

Aliphatic Amines 70-75% (Mixture is a trade secret) Benzyl Alcohol 20-30% 100-51-6 (Mixture is a trade secret)



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SECTION 4 - FIRST AID MEASURES

Description of first aid measures

General advice:	Immediately remove contaminated clothing. If danger of loss of consciousness, place patient in recovery position and transport accordingly. Apply artificial respiration if necessary. First aid personnel should pay attention to their own safety.
If inhaled:	Remove the affected individual into fresh air and keep the person calm. Assist in breathing if necessary. Immediate medical attention required.
If on skin:	Wash affected areas thoroughly with soap and water. Remove contaminated clothing. Immediate medical attention required.
If in eyes:	In case of contact with the eyes, rinse immediately for at least 15 minutes with plenty of water. Immediate medical attention required.
If swallowed:	Rinse mouth and then drink plenty of water. Do not induce vomiting. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. Immediate medical attention required.

Most important symptoms and effects, both acute and delayed

Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

Indication of any immediate medical attention and special treatment needed

Note to physician Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote. Pulmonary adema prophylaxis. Medical monitoring for at least 24 hours.

SECTION 5 - FIRE FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media: water spray, dry powder, foam, carbon dioxide

Special hazards arising from the substance or mixture

Hazards during fire-fighting: No particular hazards known.



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Advice for fire-fighters

Protective equipment for fire-fighting:

Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

Further information:

Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Wear appropriate respiratory protection. Use personal protective clothing. Ensure adequate ventilation.

Environmental precautions

This product is not regulated by RCRA. This product is not regulated by CERCLA ('Superfund'). Do not discharge into drains/surface waters/groundwater.

Methods and material for containment and cleaning up

Spills should be contained, solidified, and placed in suitable containers for disposal.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

- Containers should be opened carefully in well-ventilated areas to avoid static discharge.
- Protection against fire and explosion:
- No explosion proofing necessary.

Conditions for safe storage, including any incompatibilities

- Segregate from acids and acid forming substances. Segregate from isocyanates. Segregate from epoxides.
- Suitable materials for containers: Carbon steel (Iron), Stainless steel 1.4401, Stainless steel 1.4301 (V2), High density polyethylene (HDPE), glass, Low density polyethylene (LDPE)
- Further information on storage conditions: Containers should be stored tightly sealed in a dry place. Keep tanks under inert gas.
- Keep away from sources of ignition No smoking. Keep container tightly closed and in a cool place.
- Storage stability: Storage duration: 12 Months
- From the data on storage duration in this safety data sheet no agreed statement regarding the warrantee of application properties can be deduced.



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Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

No occupational exposure limits known.

Advice on system design:	Provide local exhaust ventilation to control vapors/mists.
Personal protective equipment	
Respiratory protection:	Wear a NIOSH-certified (or equivalent) organic vapour/particulate respirator.
Hand protection:	Chemical resistant protective gloves, Suitable materials, polyvinylchloride (Pylox)
Eye protection:	Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.
Body protection:	Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.
General safety and	
hygiene measures:	Eye wash fountains and safety showers must be easily accessible. Avoid inhalation of vapours/mists. Wear protective clothing as necessary to prevent contact.

SECTION 9: PHYSICAL/CHEMICAL PROPERTIES

Appearance: Odor:	Clear liquid Slight ammonia odor
Odor threshold:	NA
pH:	11.2
Melting point/freezing point:	NA
Boiling Range:	205C
Flash point	150C
Evaporation rate:	1.8
Flammability:	Product is combustable
Vapor Pressure:	.1 @25C
Vapor density:	3.72
Solubility:	1g/25ml water at 17C
Partition coefficient:	NA
Auto-ignition temperature:	NA
Decomposition Temperature:	<400C
Viscosity:	200cps

SECTION 10 - STABILITY AND REACTIVITY

Corrosion to metals:
Oxidizing properties:

No corrosive effect on metal. Based on its structural properties the product is not classified as oxidizing.



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Formation of flammable gases:

Forms no flammable gases in the presence of water.

SECTION 11: TOXICOLOGY INFORMATION

Acute toxicity	
Oral:	Type of value: LD50
Species:	rat
Value:	1,030 mg/kg
Inhalation:	No data available.
Dermal:	No data available. The European Union (EU) has classified this
	substance as 'harmful'.
Irritation / corrosion	
Skin:	
Species:	rabbit
Result:	Corrosive.
Eye:	
Species:	rabbit
Result:	Risk of serious damage to eyes.
Method:	OECD Guideline 405
Sensitization:	
Guinea pig maximization	test
No mutagenic effects rep	orted.
Experimental/calculated	data: Micronucleus assay
No mutagenic effects rep	orted.
Aspiration Hazard:	No aspiration hazard expected.
Species:	guinea pig
Result:	sensitizing
Method:	OECD Guideline 406
Genetic toxicity	
Experimental/calculated	data: Ames-test

SECTION 12: ECOLOGICAL INFORMATION

Fish Acute: Directive 84/449/EEC, C.1 semistatic Leuciscus idus/LC50 (96 h): 110 mg/l Nominal values (confirmed by concentration control analytics) Chronic: Study scientifically not justified. Aquatic invertebrates Acute:



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OECD Guideline 202, part 1 static Daphnia magna/EC50 (48 h): 23 mg/l Nominal values (confirmed by concentration control analytics) semistatic Chaetogammarus marinus/EC50 (48 h): 388 mg/l The details of the toxic effect relate to the nominal concentration. Chronic: OECD Guideline 202, part 2 semistatic Daphnia magna (NOEC) 21 d 3 mg/l Nominal values (confirmed by concentration control analytics) Aquatic plants Toxicity to aquatic plants: Directive 88/302/EEC, part C, p. 89 green algae/EC50 (72 h): > 50 mg/l Nominal concentration. Microorganisms Toxicity to microorganisms: DIN 38412 Part 8 bacterium/EC10 (18 h): 1,120 mg/l Nominal concentration. Degradability / Persistence **Biological / Abiological Degradation** Test method: Directive 92/69/EEC, C.4-A (aerobic), Method of analysis: DOC reduction Degree of elimination: 8 % (28 d) Evaluation: Not readily biodegradable (by OECD criteria). Hydrolysis Test method: OECD Guideline 111 Half-life: (50 °C) Bioaccumulation Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected. Literature data. Environmental mobility: Transport between environmental compartments: calculated adsorption/water - soil KOC: 928 log KOC: 2.97 Other adverse effects: Due to the pH-value of the product, neutralization is generally required before discharging sewage into treatment plants. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.



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SECTION 13: DISPOSAL CONSIDERATIONS

Waste disposal of substance: Incinerate in a licensed facility. Do not discharge substance/product into sewer system. Container disposal: Dispose of in a licensed facility. Recom

Dispose of in a licensed facility. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

SECTION 14: TRANSPORT INFORMATION

DOT PROPER SHIPPING NAME: Amine UN NUMBER: UN2735 CLASS 8 PKG III DOT HAZARD CLASS: Corrosive Liquid DOT Not Regulated TDG Not Regulated MEX UN?ID# 2735 Corrosive Liquid NOS (Amines) Class 8 PKG III **ICAO** UN?ID# 2735 Corrosive Liquid NOS (Amines) Class 8 PKG III IATA code UN?ID# 2735 Corrosive Liquid NOS (Amines) Class 8 PKG III **IMDG Code** UN?ID# 2735 Corrosive Liquid NOS (Amines) Class 8 PKG III RID UN?ID# 2735 Corrosive Liquid NOS (Amines) Class 8 PKG III



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ADR UN?ID# 2735 Corrosive Liquid NOS (Amines) Class 8 PKG III ADN UN?ID# 2735 Corrosive Liquid NOS (Amines) Class 8 PKG III

24-Hr. Emergency Phone: CHEMTEL 800-255-3924 OR 636-887-0637 SARA Title III:

This product contains no toxic chemicals subject to the report requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (EPRCA) and of 40 CFR 372.

SECTION 15: REGULATORY INFORMATION

Federal Regulations Registration status: Chemical TSCA, US released / listed OSHA hazard category: Acute target organ effects reported; Corrosive to skin and/or eyes; Sensitizer EPCRA 311/312 (Hazard categories): Acute; Chronic

SECTION 16: OTHER INFORMATION

HMIS RATINGS: Health 3 Fire 1 Physical Hazard 0 Created: 10/11/2005 Last Updated: 6/1/2016 The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Gateway Composites LLC be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Gateway Composites LLC has been advised of the possibility of such damages.



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GATEWAY COMPOSITES | SAFETY DATA SHEET 777 EPOXY FILLER COMPOUND RESIN Re

Revision Date 17-Jul-2016

SECTION I - IDENTIFICATION

Product identifier Product Name

777 Epoxy Filler Compound Resin

777 Resin Synonyms None

Other means of identification Product Code

Pagammandad	use of the che	migal and rectr	intions on use
Recommended	use of the che	mical and restr	ictions on lise

Recommended Use	Industrial Filler Compound, Adhesive or Coating
Uses advised against	No information available

Details of the supplier of the safety data sheet

Supplier Address Gateway Composites 120 East Highway A Wentzville, MO 63385

Emergency telephone number

Company Phone Number	636-887-0637
Emergency Telephone	CHEMTEL: 800-255-3924

SECTION 2 - HAZARDOUS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin corrosion/irritation	Category 2
Serious eye damage/irritation	Category 2A
Skin sensitization	Category 1

Label elements

Emergency Overview

Warning

Hazard statements

Causes skin irritation Causes serious eye irritation May cause an allergic skin reaction



120 East Hwy A Wentzville MO 63385 636.887.0637



Appearance viscous semi-solid Physical state liquid

Odor slight solvent

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling Avoid breathing dust/fume/gas/mist/vapors/spray Wear protective gloves/protective clothing/eye protection/face protection Contaminated work clothing should not be allowed out of the workplace

Precautionary Statements - Response

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 advice/attention IF ON SKIN: Wash with plenty of soap and water Take off contaminated clothing and wash before reuse If skin irritation or rash occurs: Get medical advice/attention

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not other1111ise classified (HNOC)

Not applicable

Other Information

May be harmful if swallowed. Harmful to aquatic life with long lasting effects.

Unknown acute toxicity

88% of the mixture consists of ingredient(s) of unknown toxicity



120 East Hwy A Wentzville MO 63385 636.887.0637

<u>Substance</u>

Not applicable

<u>Mixture</u>

Chemical Name	CASNo	Weight-%
Quartz*	14808-60-7	30 - 60
Bisphenol A-epichlorohydrin polymer*	25068-38-6	30 - 60
Phenol, polymer w/ formaldehyde, glycidyl ether*	28064-14-4	3 - 7
Silica, amorphous, precipitated and gel*	112926-00-8	1 - 5
Titanium oxide	13463-67-7	1 - 5

* The exact percentage (concentration) of composition has been witheld as a trade secret.

SECTION 4 - FIRST AID MEASURES

Description of first aid measures

General Advice	If symptoms persist, call a physician. Do not breathe dust/ fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing.
Eye Contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Wash contaminated clothing before reuse. If skin irritation persists, call a physcian.
Inhalation	Remove to fresh air. If symptoms persist, call a physcian.
Ingestion	Rinse mouth. Drink plenty of water. Do not induce vomiting without medical advice. Never give anything by mouth to an unconcious person. Call a physician or poison control center immediately.
Self-protection of the first aider	Use personal protective equipment as required.



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Most important symptoms and effects, both acute and delayed

Symptoms	May cause redness and tearing of		
	the eyes. May cause skin irritation. Redness.		

Indication of any immediate medical attention and special treatment needed

Note to physicians

May cause sensitization in susceptible persons. Treat symptomatically.

SECTION 5 - FIRE FIGHTING MEASURES

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Dry chemical, CO2, sand, earth, water spray or regular foam.

Unsuitable extinguishing media Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from the chemical

In the event of a fire and/or explosion do not breathe fumes. May cause sensitization in susceptible persons. Thermal decomposition can lead to release of irritating and toxic gases and vapors.

Explosion data

Sensitivity to Mechanical Impact None. Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions

Use personal protective equipment as required. Avoid contact with eyes and skin. Evacuated personnel to safe areas. Keep people away from and upwind of spill/leak.



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Environmental precautions

Environmental precautions

Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning upUse personal protective equipment as required.
Dam up. Soak up with inert absorbent material
(e.g. sand, silica gel, acid binder, universal binder,
sawdust). Take up mechanically, placing in
appropriate containers for disposal. Clean
contaminated surface thoroughly.

SECTION 7 - HANDLING & STORAGE

Precautions for safe handling

Advice on safe handlingUse personal protective equipment as required.
Ensure adequate ventilation, especially in confined
areas. Use with local exhaust ventilation. Do not
breathe dust/fume/gas/mist/vapors/spray.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep out of the reach of children. Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labeled containers.

Incompatible material Strong oxidizing agents. Strong acids. Strong bases.



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SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Quartz 14808-60-7	TWA: 0.025 mg/m ³ respirable fraction	(30)/(%SiO2 + 2) mg/m ³ TWA total dust (250)/(%SiO2 + 5) mppcf TWA respirable fraction (10)/(%SiO2 + 2) mg/m ³ TWA respirable fraction	IDLH: 50 mg/m ³ respirable dust TWA: 0.05 mg/m ³ respirable dust
Silica, amorphous, precipitated and gel 112926-00-8	-	TWA: 20 mppcf (80)/(% SiO2) mg/m³ TWA	-
Titanium dioxide 13463-67-7	TWA: 10 mg/m ³	TWA: 15 mg/m³ total dust	IDLH: 5000 mg/m ³

NIOSH IDLH Immediately Dangerous to Life or Health

Appropriate engineering controls

Engineering Controls	Showers
	Eyewash stations
	Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin and body protection Wear protective gloves and protective clothing.

Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Considerations When using do not eat, drink or smoke. Wash contaminated clothing before reuse. Regular cleaning of equipment, work area and clothing is recommended.



120 East Hwy A Wentzville MO 63385 636.887.0637

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state Appearance Color	liquid viscous semi-solid pigmented	Odor Odor threshold	Slight solvent No information
Property pH Melting point/ freezing poi Boiling point/ boiling range Flash point Evaporation rate Flammability (solid, gas) Flammability Limit in Air Upper flammability Lower flammability Vapor pressure Vapor density Relative density Water solubility Solubility in other solvents Partition coefficient Autoignition temperature Decomposition temperature Decomposition temperature Decomposition temperature Decomposition temperature Decomposition temperature Decomposition temperature Decomposition temperature Decomposition temperature Dynamic viscosity Explosive properties Oxidizing properties	 > 120°C / > 248° > 198° C / 388° F No information a No information a imit: No information a No information a No information a No information a 1.5 Partially soluble No information a No information a No information a 	available available F available available available available available available available available available available available available available available available	narks • Method
<u>Other Information</u> Softening point Molecular weight voe Content (%)	No information a No information a 0 g/L		

No information available

No information available



Density

Bulk density

120 East Hwy A Wentzville MO 63385 636.887.0637

SECTION 10 - STABILITY & REACTIVITY

Reactivity No data available

<u>Chemical stability</u>
 Stable under recommended storage conditions.
 <u>Possibility of Hazardous Reactions</u>
 None under normal processing.
 <u>Conditions to avoid</u>
 Elevated Temperature. Incompatible materials.
 <u>Incompatible materials</u>
 Strong oxidizing agents. Strong acids. Strong bases.
 <u>Hazardous Decomposition Products</u>
 Thermal decomposition can lead to release of irritating and toxic gases and vapors.

SECTION 11 - TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	No data available.
Eye contact	Irritating to eyes.
Skin contact	Irritating to skin. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.
Ingestion	No data available.

Chemical Name	Oral LD50	Dermal LOSO	Inhalation LCSO
Quartz	= 500 mg/kg (Rat)	-	-
14808-60-7			
Bisphenol A-			
epichlorohydrin polymer			
25068-38-6	= 11400 mg/kg (Rat)	-	-
Titanium dioxide			
13463-67-7	= 1000 mg/kg (Rat)	-	-



120 East Hwy A Wentzville MO 63385 636.887.0637

Information on toxicological effects



Symptoms May cause skin irritation. May cause an allergic skin reaction. May cause redness and tearing of the eyes.

<u>Delayed and immediate effects as well as chronic effects from short</u> <u>and long-term exposure</u>

Sensitization	May cause sensitization by skin contact.	
Germ cell mutagenicity	No information available.	
Carcinogenicity	This product contains titanium dioxide which is classified as a possible carcinogen when present as respirable dust. This is not relevant for this product since it is a liquid. This product contains crystalline silica (quartz) in a non- respirable form. Inhalation of crystalline silica is unlikely	

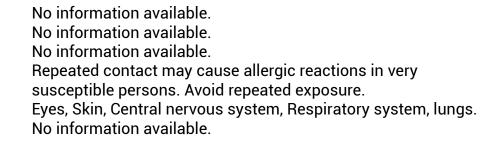
to occur from exposure to this product.

Chemical Name	ACGIH	IARC	NTP	OSHA
Quartz	A2	Group 1	Known	Х
14808-60-7				
Silica, amorphous,	-	Group 3	-	-
precipitated and gel				
112926-00-8				
Titanium dioxide	-	Group 2B	-	Х
13463-67-7				

ACGIH (American Conference of Governmental Industrial Hygienists) A2 - Suspected Human Carcinogen IARC (International Agency for Research on Cancer) Group 1 - Carcinogenic to Humans Group 2B - Possibly Carcinogenic to Humans Not classifiable as a human carcinogen NTP (National Toxicology Program) Known - Known Carcinogen OSHA (Occupational Safety and Health Administration of the US Department of Labor) X - Present

Reproductive toxicity STOT - single exposure STOT - repeated exposure Chronic Toxicity

Target Organ Effects Aspiration Hazard





120 East Hwy A Wentzville MO 63385 636.887.0637

Numerical measures of toxicity - Product Information



The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)

4,000.00 mg/kg

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity

Harmful to aquatic life with long lasting effects

88% of the mixture consists of component(s) of unknown hazards to the aquatic environment.

<u>Persistence and degradability</u> No information available.

<u>Bioaccumulation</u> No information available.

Other Adverse Effects No information available.

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste treatment methods

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

Contaminated packaging Do not reuse container.

SECTION 14 - TRANSPORT INFORMATION

TDG Not regulated



120 East Hwy A Wentzville MO 63385 636.887.0637

<u>IATA</u>

UN/ID no	UN3082
Proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Hazard Class	9
Packing Group	III
ERG Code	9L
Special Provisions	A97, A158, A197
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s.
	(Bisphenol A-epichlorohydrin polymer), 9, III
<u>IMDG</u>	
UN/ID no	UN3082
Proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Hazard Class	9
Packing Group	III
EmS-No	F-A, S-F
Special Provisions	274, 335
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Bisphenol A-epichlorohydrin polymer), 9, III

SECTION 15 - REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

Legend:

 TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
 DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
 EINECSIELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

- **ENCS** Japan Existing and New Chemical Substances
- **IECSC** China Inventory of Existing Chemical Substances KECL Korean Existing and Evaluated Chemical Substances
- **PICCS Philippines Inventory of Chemicals and Chemical Substances**
- AICS Australian Inventory of Chemical Substances



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US Federal Regulations

<u>SARA 313</u>

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

<u>CERCLA</u>

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals

Chemical Name	California Proposition 65	
Quartz - 14808-60-7	Carcinogen	
Titanium dioxide - 13463-67-7	Carcinogen	



120 East Hwy A Wentzville MO 63385 636.887.0637

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Quartz 14808-60-7	Х	Х	Х
Silica, amorphous, precipitated and gel 112926-00-8	Х	x	х
Titanium dioxide 13463-67-7	Х	Х	Х

U.S. EPA Label Information EPA Pesticide Registration Number

Not Applicable

SECTION 16 - OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

<u>NFPA</u>	Health hazards	2 Flammability 1	Instability 0	Physical and Chemical Properties -
<u>HMIS</u>	Health hazards	2 Flammability 1	Physical hazards 0	Personal protection X
Issue Da		15-Mar-2016		
Revision	Date	15-Mar-2016		

Revision Note

No information available

<u>Disclaimer</u>

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.



120 East Hwy A Wentzville MO 63385 636.887.0637

GATEWAY COMPOSITES | SAFETY DATA SHEET 777 EPOXY FILLER COMPOUND HARDENER Revision Date 17-Jul-2016

SECTION I - IDENTIFICATION

Product identifier

Product Name

777 Epoxy Filler Compound Hardener

Other means of identification

Product Code 777 Hardener Synonyms None

Recommended use of the chemic	cal and restrictions on use
Recommended Use	Industrial Filler Compound, Adhesive or Coat

advised against No information available

Details of the supplier of the safety data sheet

Supplier Address Gateway Composites 120 East Highway A Wentzville, MO 63385

Emergency telephone number

Company Phone Number	636-887-0637
Emergency Telephone	CHEMTEL: 800-255-3924

SECTION 2 - HAZARDOUS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 1 Sub-category C
Serious eye damage/eye irritation	Category 1
Skin sensitization	Category 1

Label elements

Emergency Overview

Danger

Hazard statements

Harmful if swallowed

Causes severe skin burns and eye damage May cause an allergic skin reaction



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info@gatewaycomposites.com gatewaycomposites.com Appearance viscous paste Physical state liquid

Odor Amine

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Do not breathe dust/fume/gas/mist/vapors/spray

Wear protective gloves/protective clothing/eye protection/face protection

Contaminated work clothing should not be allowed out of the workplace

Precautionary Statements - Response

Immediately call a POISON CENTER or doctor/physician

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

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

Wash contaminated clothing before reuse

If skin irritation or rash occurs: Get medical advice/attention

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing Immediately call a POISON CENTER or doctor/physician

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell Rinse mouth Do NOT induce vomiting

Precautionary Statements - Storage

Store locked up

Precautionary Statements Disposal Dispose of contents/container to an approved waste disposal plant

Hazards not other1111ise classified (HNOC)

Not applicable

Other Information

Harmful to aquatic life with long lasting effects.

Unknown acute toxicity

39% of the mixture consists of ingredient(s) of unknown toxicity



120 East Hwy A Wentzville MO 63385 636.887.0637

Substance

Not applicable

<u>Mixture</u>

Chemical Name	CASNo	Weight-%
Quartz*	14808-60-7	30-60
Polyamidoamine *	Proprietary	10 -30
Wollastonite (Ca(SiO3)) •	13983-17-0	10- 30
2,4,6-Tri(dimeth,,laminomethyl)phenol'	90-72-2	3-7
Trieth\Jlenetetramine *	112-24-3	1 - 5
Diethvlenetriamine *	111-40-0	1 - 5
Silica, amorphous, precipitated and gel *	112926-00-8	1 - 5

SECTION 4 - FIRST AID MEASURES

Description of first aid measures

General advice Eye contact	In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). If symptoms persist, call a physician. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and
Skin contact	easy to do. Continue rinsing. Call a physician immediately. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. For minor skin contact, avoid spreading material on unaffected skln. If skin irritation persists, call a physician.
Inhalation	Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. If symptoms persist, call a physician.
Ingestion	Call a physician or poison control center immediately, Rinse mouth. Drink plenty of water. Do not induce vomiting without medical advice.
Self-protection of the first aider	Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.



120 East Hwy A Wentzville MO 63385 636.887.0637

Most important symptoms and effects, both acute and delayed



Symptoms

Causes skin and eye burns. May result in permanent damage including blindness. May cause allergic skin reaction. Coughing and/ or wheezing.

Indication of any immediate medical attention and special treatment needed

Note to physicians

Treat symptomatically.

SECTION 5 - FIRE FIGHTING MEASURES

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Dry chemical, CO2, alcohol-resistant foam or water spray. Move containers from fire area if you can do it without risk.

Unsuitable extinguishing media Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from the chemical

The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating and toxic gases and vapors. Runoff may pollute waterways.

Explosion data

Sensitivity to Mechanical Impact None. Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions

Remove all sources of ignition. Evacuate personnel to safe areas. Ensure adequate ventilation, especially in confined areas. Use personal protective equipment as required. Keep people away from and upwind of spill/leak.



120 East Hwy A Wentzville MO 63385 636.887.0637

Environmental precautions

Environmental precautions

Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for containmentAbsorb or cover with dry earth, sand or other
non-combustible material and transfer to
containers.

Methods for cleaning upCover liquid spill with sand, earth or other
non-combustible absorbent material. Use personal
protective equipment as required. Dam up. Take up
mechanically, placing in appropriate containers for
disposal. Clean contaminated surface thoroughly.

SECTION 7 - HANDLING & STORAGE

Precautions for safe handling

Advice on safe handling

Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Wash contaminated clothing before reuse. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product.

Conditions for safe storage, including any incompatibilities

Storage ConditionsKeep container tightly closed in a dry and well-
ventilated place. Keep out of the reach of children.Incompatible materialStrong oxidizing agents. Strong acids.
Strong bases.



120 East Hwy A Wentzville MO 63385 636.887.0637

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

	-		
Chemical Name	ACGIHTLV	OSHA PEL	NIOSH IDLH
Quartz	TWA: 0.025 mg/m3	(30)/(%SiO2 + 2) mg/m'	IDLH: 50 mg/m3
14808-60-7	respirable fraction	TWA total dust	respirab!e dust
		(250)/(%SiO2 + 5) mppcf	TWA: 0.05 mg/m3
		TWA respirable fraction	respirable dust
		(10)/(%SiO2 + 2) mg/m'	
		TWA respirable fraction	
Diethylenetriamine	TWA! 1 ppm	-	TWA: 1 ppm
111-40-0	S-		TWA:4mg/m3
Silica, amorphous,		TWA: 20 mppcf	
precipitated and gel		(80)/(% SiO2) mg/m' TWA	
112926-00-8			

Legend

Skin - Skin Absorber NIOSH IDLH Immediately Dangerous to Life or Health

Appropriate engineering controls

Engineering Controls	Showers
	Eyewash stations
	Ventilation systems.

Individual protection measures. such as personal protective equipment

- **Eye/face protection** Tight sealing safety goggles.
- Skin and body protection Wear protective gloves and protective clothing.
- **Respiratory protection** If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.



120 East Hwy A Wentzville MO 63385 636.887.0637

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state Appearance Color

liquid viscous paste pigmented

Odor Odor threshold Amine No information available

Property	Values	Remarks · Method
pH	No information available	
Melting point/ freezing point	No information available	
Boiling point/ boiling range	> 120 'C I 248 'F	
Flock point		
Flash point	> 100 'CI 212 'F No information available	Pensky-Martens Closed Cup (PMCC)
Evaporation rate		
Flammability (solid, gas)	No information available	
Flammability Limit in Air Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	No information available	
Vapor density	No information available	
Relative density	1.5	
Water solubility	Insoluble in water	
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
Explosive properties	Not an explosive	
Oxidizing properties	Not Applicable	
Other Information		
Softening point	No information available	
Molecular weight	No information available	
voe Content (%)	0 g/L	
Density	No information available	
Bulk density	No information available	



120 East Hwy A Wentzville MO 63385 636.887.0637

SECTION 10 - STABILITY & REACTIVITY

Reactivity No data available

Chemical stability Stable under recommended storage conditions. **Possibility of Hazardous Reactions** Hazardous polymerization does not occur. **Conditions to avoid** Elevated Temperature. Incompatible materials. **Incompatible materials** Strong oxidizing agents. Strong acids. Strong bases. **Hazardous Decomposition Products**

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

SECTION 11 - TOXOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	May cause irritation.
Eye contact	Corrosive to the eyes and may cause severe damage including blindness.
Skin contact	May cause burns. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

Ingestion Can burn mouth, throat, and stomach.

Chemical Name	Oral LD50	Dermal LOSO	Inhalation LCSO
Quartz	= 500 mg/kg (Rat)	-	-
14808-60-7			
2,4,6-Tri	= 1200 mg/kg (Rat)	= 1280 mg/kg (Rat)	
(dimethylaminomethyl)			
phenol 90-72-2			
riethylenetetramine	= 2500 mg/kg (Rat)	= 550 mg/kg (Rabbit)	-
112-24-3			
Dlethylenetriamine	= 1 080 mg/kg (Rat)	= 672 mg/kg (Rabbit)	= 70 mg/L (Rat) 4 h
111-40-0			



120 East Hwy A Wentzville MO 63385 636.887.0637

Information on toxicological effects

SymptomsMay cause an allergic skin reaction. Causes skin
burns. May cause redness and tearing of the eyes.
May result in permanent damage including blindness.
Coughing and/ or wheezing.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization	May cause sensitization in susceptible persons.
Germ cell mutagenicity	Based on available data, the classification criteria are not met.
Carcinogenicity	This product contains crystalline silica (quartz) in a non-respirable form. Inhalation of crystaline silica (quartz) in a non-respirable form. Inhalation of crystalline silica is unlikely to occur from exposure to thie product.

Chemical Name	ACGIH	IARC	NTP	OSHA
Quartz	A2	Group 1	Known	Х
14808-60-7				
Wollastonite (Ca(SiO3))	-	Group 3	-	-
13983-17-0				
Silica, amorphous,	-	Group 3	-	-
precipitated and gel				
112926-00-8				

ACGIH (American Conference of Governmental Industrial Hygienists) A2 - Suspected Human Carcinogen IARC (International Agency for Research on Cancer) Group 1 - Carcinogenic to Humans Not classifiable as a human carcinogen NTP (National Toxicology Program) Known - Known Carcinogen OSHA (Occupational Safety and Health Administration of the US Department of Labor) X - Present

Reproductive toxicity STOT - single exposure STOT - repeated exposure Target Organ Effects Aspiration hazard Based on available data, the classification criteria are not met. Target Organs. Respiratory system. Eyes. Skin.

Based on available data, the classification criteria are not met **Eyes, Respiratory system, Skin, lungs.**

Based on available data, the classification criteria are not met.



120 East Hwy A Wentzville MO 63385 636.887.0637

Numerical measures of toxicity - Product Information



The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) ATEmix (dermal) ATEmix (inhalation-dust/mist) 1,876.00 mg/kg 6,954.00 mg/kg mg/l 2,135.00 mg/l

Ecotoxicity

Harmful to aquatic life with long lasting effects

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Triethylenetetramine	2.5: 72 h Desmodesmus subspicatus mg/L EC50 20: 72 h Pseudokirchnerlella subcapitata mg/L EC50 3.7: 96 h Pseudokirchneriella subcapitata mg/L EC50	570: 96 h Poecilia reticulata mg/L LC50 sem! static 495: 96 h Pimephales promelas mg/L LC50	31.1: 48 h Daphnia magna mg/L EC50
Diethylenetriamine 111-40-0	1164: 72 h Pseudokirchneriella subcapitata mg/L EC50 345.6: 96 h Pseudokirchneriella subcapitata mg/L EC50 592: 96 h Desmodesmus subspicatus mg/L EC50	248: 96 h Poecilia reticulata mg/L LC50 static 430: 96 h Leuciscus idus mg/L LC50 semi-static 1014: 96 h Poecilia reticulata mg/L LC50 semi-static	16: 48 h Daphnia magna mg/L EC50 37: 24 h Daphnia magna mg/L EC50
Bisphenol A 80-05-7	2.5: 96 h Pseudokirchneriella subcapitata mg/L EC50	3.6 - 5.4: 96 h Pimephales promelas mg/L LCS0 flow-through 4.0 - 5.5: 96 h Pimephales promelas mg/L LCS0 static 4: 96 h Oncorhynchus mykiss mg/L LC50 9.9: 96 h Brachydanio rerio mg/L LC50 static	10.2: 48 h Daphnia magna mg/L EC50 3.9: 48 h Daphnia magna mg/L EC50 9.2 - 11.4: 48 h Daphnia magna mg/L EC50 Static

Persistence and degradability

No information available.

Bioaccumulatio11

Chemical Name	Partition coefficient
Triethylenetetramine	-1.4
112-24-3	
Diethylenetriamine	-1.3
111-40-0	

Other adverse effects

No information available



120 East Hwy A Wentzville MO 63385 636.887.0637

SECTION 13 - DISPOSABLE CONSIDERATIONS

Waste treatment methods

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

Contaminated packaging Do not reuse container.

US EPA Waste Number D002

Chemical Name	California Hazardous Waste Status
Diethylenetriamine 111-40-0	Toxic

DOT

UN/ID no Proper shipping name Hazard Class Packing Group Special Provisions Description Emergency Response Guide Number	UN3066 Paint 8 III B52, IB3, T4, TP1, TP29 UN3066, Paint, 8, III 153
TOG UN/ID no Proper shipping name Hazard Class Packing Group Description	UN3066 Paint 8 III UN3066, Paint, 8, III
IATA UN/ID no Proper shipping name Hazard Class Packing Group ERG Code Special Provisions Description	UN3066 Paint 8 III BL A3,A72,A803,A192 UN3066, Paint, 8, III
IMDG UN/ID no Proper shipping name Hazard Class Packing Group EmS-No Special Provisions Description	UN3066 Paint 8 III F-A, S-B 163,223 UN3066, Paint, 8, III



120 East Hwy A Wentzville MO 63385 636.887.0637

SECTION 15 - REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
 DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
 EINECSIELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
 ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

US Federal Regulations

<u>SARA 313</u>

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	SARA 313 Threshold Values%
Bisphenol A - 80-05-7	1.0

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)



120 East Hwy A Wentzville MO 63385 636.887.0637

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals

Chemical Name	California Pronosition 65
Quartz- 14808-60-7	Carcinogen
Bisphenol A - 80-05-7	Female Reproductive

U.S. State Right-to-Know Regulations

Chemical Name	New Jersev	Massachusetts	Pennsvlvania
Quartz	Х	Х	Х
14808-60-7			
Triethylenetetramine	Х	Х	Х
112-24-3			
Silica, amorphous,	Х	Х	Х
precipitated and gel			
112926-00-8			
Diethylenetriamine	Х	Х	Х
111-40-0			
Bisphenol A	Х	Х	Х
80-05-7			

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable



120 East Hwy A Wentzville MO 63385 636.887.0637

SECTION 16 - OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA	Health hazards 3	Flammability	Instability 0	Physical and Chemical Properties -
HMIS	Health hazards 3	Flammability	Physical hazards 0	Personal protection X
Issue Dat Revision		I 5-Mar-2016 I 7-Jul-2016		

Revision Note

No information available

Disclaimer

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.



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