POLYMER COMPOSITES, INC.

1871 Lake Pl., Ontario, CA 91761 • (909) 673–1625 • Fax: (909) 673-1605

Safety Data Sheet

MAX TCR A/B SDS- GHS COMPLIANT

SECTION 1: IDENTIFICATION

Product/Chemical Name **MAX TCR PART A**

Recommended Use EPOXY RESIN COMPONENT

Manufacturer Information – Compounding Only

Polymer Composites, Inc.
1871 Lake Place
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SECTION 2: HAZARD(S) IDENTIFICATION

Hazard Classification Mild Skin Irritant

Signal Word Warning

Pictogram(s)

GHS Label elements, including precautionary statements

Health Hazards:	H319	Causes eye irritation Category 2A
	H315	Causes skin irritation Category 2
	H317	May cause an allergic skin reaction Category 1
	H411	Toxic to aquatic life with long lasting effects
Precautionary Statements	P280	Wear protective gloves/protective clothing/eye protection/face protection
	P273	Avoid release to the environment
	P303+P361 +P353	IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
	P280	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P391	Collect spillage.
	P501	Dispose of contents and container to licensed, permitted incinerator, or other thermal destruction device.

Hazards not otherwise classified (HNOC) or not covered by GHS: No information Available.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component/s	%	OSHA PEL	ACGIH TLV	CAS #
Modified Derivatives of Bisphenol A Resins	75 - 90	•	•	Proprietary
Acrylated Monomer	1-3	•	•	Proprietary
Glycidyl Ether(C12-C14 alkyloxy)	3-10	•	•	68609-97-2

SECTION 4: FIRST-AID MEASURES

Description of first aid measures

First-aid measures general First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

First-aid measures after inhalation Move person to fresh air; if effects occur, consult a physician.

First-aid measures after skin contact Remove material from skin immediately by washing with soap and plenty of water. Remove contaminated clothing and shoes while washing. Seek medical attention if irritation persists. Wash clothing before reuse. Discard items which cannot be decontaminated, including leather articles such as shoes, belts and watchbands. Safety shower should be located in immediate work area.

First-aid measures after eye contact Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist. Suitable emergency eye wash facility should be available in work area.

First-aid after ingestion No emergency medical treatment necessary.

Most important symptoms and effects, both acute and delayed

No additional symptoms and effects are anticipated, aside from information found under Description of First Aid Measures.

Indication of any immediate medical attention and special treatment needed

No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

STEP 5: FIRE-FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective. Water fog, applied gently may be used as a blanket for fire extinguishment.

Unsuitable extinguishing media Do not use direct water stream; may spread fire

Special hazards arising from the substance or mixture

Hazardous Combustion Products During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Phenolics. Carbon monoxide. Carbon dioxide.

Unusual Fire and Explosion Hazards 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.

Advice for firefighters

Fire Fighting Procedures

Keep people away. Isolate fire and deny unnecessary entry. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Do not use direct water stream. May spread fire. Move container from fire area if this is possible without hazard. 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 (M)SDS.

Special Protective Equipment for Firefighters

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

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Isolate area. Keep unnecessary and unprotected personnel from entering the area. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection. Refer to Section 7, Handling, for additional precautionary measures.

Environmental Precautions

Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information

Methods and Materials for Containment and Cleaning Up

Contain spilled material if possible. Absorb with materials such as: Sand. Polypropylene fiber products. Polyethylene fiber products. Remove residual with soap and hot water. Collect in suitable and properly labeled containers. Residual can be removed with solvent. Solvents are not recommended for clean-up unless the recommended exposure guidelines and safe handling practices for the specific solvent are followed. Consult appropriate solvent Safety Data Sheet for handling information and exposure guidelines. See Section 13, Disposal Considerations, for additional information.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Avoid prolonged or repeated contact with skin. Avoid contact with eyes, skin, and clothing. Wash thoroughly after 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.

Conditions for safe storage, including any incompatibilities

Recommended pumping and storage temperature for bulk shipments is 60°C (140°F) Additional storage and handling information on this product may be obtained by calling your sales or customer service contact.

Shelf life: Use within 12 months

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits

None established

Derived No Effect Level (DNEL)

Workers

Potential Health Effects	Possible Route(s) of Exposure	Value
Acute – Systemic Effects	Skin Contact	No data available
Acute – Systemic Effects	Inhalation	No data available
Acute – Local Effects	Skin Contact	No data available
Acute – Local Effects	Inhalation	No data available
Long-Term – Systemic Effects	Skin Contact	No data available
Long-Term – Systemic Effects	Inhalation	No data available
Long-Term – Local Effects	Skin Contact	No data available
Long-Term – Local Effects	Inhalation	No data available

Consumers

Potential Health Effects	Possible Route(s) of Exposure	
Acute – Systemic Effects	Skin Contact	No data available
Acute – Systemic Effects	Inhalation	No data available
Acute – Systemic Effects	Ingestion	No data available
Acute – Local Effects	Skin Contact	No data available
Acute – Local Effects	Inhalation	No data available
Long-Term – Systemic Effects	Skin Contact	No data available
Long-Term – Systemic Effects	Inhalation	No data available
Long-Term – Systemic Effects	Ingestion	No data available
Long-Term – Local Effects	Skin Contact	No data available
Long-Term – Local Effects	Inhalation	No data available

Predicted No Effect Concentration (PNEC)

Compartment	Value	Remarks
Fresh Water	0.006 mg/l	n/a
Marine Water	0.0006 mg/l	n/a
Intermittent Releases	0.018 mg/l	n/a
STP	10 mg/l	n/a
Fresh Water Sediment	0.996 mg/l	n/a
Marine Sediment	0.0996 mg/l	n/a
Soil	0.196 mg/l	n/a

Exposure Controls

Personal Protection

Eye/Face Protection

Use safety glasses (with side shields). Safety glasses (with side shields) should be consistent with EN 166 or equivalent.

Skin Protection

Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

Hand Protection

Use chemical resistant gloves classified under Standard EN374: Protective gloves against chemicals and micro-organisms. Examples of preferred glove barrier materials include: Butyl rubber. Ethyl vinyl alcohol laminate ("EVAL"). Nitrile/butadiene rubber ("nitrile" or "NBR"). Neoprene. Polyvinyl chloride ("PVC" or "vinyl"). When prolonged or frequently repeated contact may occur, a glove with a protection class of 6 (breakthrough time greater than 480 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 1 or higher (breakthrough time greater than 10 minutes according to EN 374) is recommended. NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Respiratory Protection

Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions, no respiratory protection should be needed; however, if material is heated or sprayed, use an approved air-purifying respirator. Use the following CE approved air-purifying respirator: Organic vapor cartridge with a particulate pre-filter, type AP2.

Ingestion

Use good personal hygiene. Do not consume or store food in the work area. Wash hands before smoking or eating.

CONTROLS

Engineering Controls

Ventilation

Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Viscous liquid	**Solubility**	Insoluble in water
Color	Clear	**Initial Boiling Point and Boiling Range**	n/a
Density	1.07 to 1.10 g/cm^3	**Flash Point**	No data available
Upper/Lower Flammability or Explosive Limits	n/a	**Evaporation Rate**	No data available
Odor	Slightly sweet; distinct odor	**Flammability**	No
Vapor Pressure	0.000000046 Pa @ 25°C	**Upper/Lower Flammability or Explosive Limits**	No data available
Odor Threshold	Not data available	**Partition Coefficient**	3.242 Estimated
Vapor Density	No data available	**Ignition Temperature**	235°C (455°F)
pH	No data available	**Decomposition Temperature**	No test data available
Relative Density	No data available		
Melting/Freezing Point	No data available		

SECTION 10: STABILITY AND REACTIVITY

Reactivity	No dangerous reaction known under conditions of normal use.
Chemical stability	Stable under recommended storage conditions. See Storage, Section 7.
Possibility of Hazardous Reactions	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.
Conditions to Avoid	Avoid short term exposures to temperatures above 300 °C. Avoid prolonged exposure to temperatures above 250 °C. Potentially violent decomposition can occur above 350 °C. Generation of gas during decomposition can cause pressure in closed systems. Pressure build-up can be rapid.
Incompatible Materials	Avoid contact with oxidizing materials. Avoid contact with: Acids. Bases. Avoid unintended contact with amines.
Hazardous Decomposition Products	Decomposition products depend upon temperature, air supply and the presence of other materials. Gases are released during decomposition. Uncontrolled exothermic reaction of epoxy resins release phenolics, carbon monoxide, and water.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on Toxicological Effects

Acute Toxicity

Ingestion	Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts. LD50, Rat > 15,000 mg/kg
Aspiration Hazard	Based on physical properties, not likely to be an aspiration hazard.
Dermal	Prolonged skin contact is unlikely to result in absorption of harmful amounts. LD50, Rabbit 23,000 mg/kg
Inhalation	At room temperature, exposure to vapor is minimal due to low volatility. Vapor from heated material, mist or aerosols may cause respiratory irritation. As product: The LC50 has not been determined.
Eye Damage/Eye Irritation	May cause eye irritation. Corneal injury is unlikely.
Skin Corrosion/Irritation	Prolonged contact may cause skin irritation with local redness. Repeated contact may cause skin irritation with local redness.

Sensitization

Skin	Has caused allergic skin reactions in humans. Did not demonstrate the potential for contact allergy in mice.
Respiratory	Relevant data not available.

TOXICOLOGICAL INFORMATION

Repeated Dose Toxicity
Except for skin sensitization, repeated exposures to low molecular weight epoxy resins of this type are not anticipated to cause any significant adverse effects.

Chronic Toxicity and Carcinogenicity
Many studies have been conducted to assess the potential carcinogenicity of diglycidyl ether of bisphenol A (DGEBPA). 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. 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.

Developmental Toxicity
Resins based on the diglycidyl ether of bisphenol A (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 Toxicity
In animal studies, did not interfere with reproduction.

Genetic Toxicity
In vitro genetic toxicity studies were negative in some cases and positive in other cases. Animal genetic toxicity studies were negative.

SECTION 12: ECOLOGICAL INFORMATION (NON-MANDATORY)

Toxicity	Toxicity to aquatic organisms (LC50/EC50/IC50 between 1 and 10 mg/L in the most sensitive species).
Fish Acute & Prolonged Toxicity	LC50, rainbow trout (Oncorhynchus mykiss), static renewal, 96 h: 2 mg/l
Aquatic Invertebrate Acute Toxicity	EC50, water flea Daphnia magna, static, 48 h, immobilization: 1.8 mg/l
Aquatic Plant Toxicity	ErC50, Scenedesmus capricornutum (fresh water algae), static, Growth rate inhibition, 72 h: 11 mg/l
Toxicity to Microorganisms	IC50; bacteria, 18 h: > 42.6 mg/l

Persistence and Degradability Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.

Biodegradation	Exposure Time	Method	10 Day Window
<12%	28 d	OECD 302B Test	n/a

Bioaccumulative Potential
Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).

Partition coefficient, n-octanol/water (log Pow) 3.242 Estimated

Mobility in Soil
Potential for mobility in soil is low (Koc between 500 and 2000)., Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.

Partition coefficient, soil organic carbon/water (Koc)
1,800 - 4,400 Estimated.

Henry's Law Constant (H)
4.93E-05 Pa*m3/mole.; 25 °C

Results of PBT and vPvB assessment
This substance is not considered to be persistent, bioaccumulating and toxic (PBT).

Other adverse effects
This substance is not in Annex I of Regulation (EC) 2037/2000 on substances that deplete the ozone layer.

SECTION 13: DISPOSAL CONSIDERATIONS (NON-MANDATORY)

Waste Treatment Methods
This product, when being disposed of in its unused and uncontaminated state should be treated as a hazardous waste according to EC Directive 91/689/EEC. Any disposal practices must be in compliance with all national and provincial laws and any municipal or local by-laws governing hazardous waste. For used, contaminated and residual materials additional evaluations may be required. Do not dump into any sewers, on the ground, or into any body of water.

SECTION 14: TRANSPORT INFORMATION (NON-MANDATORY)

Road & Rail

UN Proper Shipping Name	Epoxy resin
UN Number	Not regulated
Transport Hazard Classes	N/A
Packing Group Number	N/A
Classification	N/A
Hazard Identification No.	N/A
Environmental Hazard	N/A

Ocean

UN Proper Shipping Name	Epoxy resin
UN Number	Not regulated
Transport Hazard Classes	N/A
Packing Group Number	N/A
Cargo Packing Instruction	N/A
Passenger Packing Instruction	N/A
Environmental Hazard	N/A

Air

UN Proper Shipping Name	Epoxy resin
UN Number	Not regulated
Transport Hazard Classes	N/A
Packing Group Number	N/A
Cargo Packing Instructions	N/A
Passenger Packing Instruction	N/A
Environmental Hazard	N/A

Inland Waterways

UN Proper Shipping Name	Epoxy resin
UN Number	Not regulated
Transport Hazard Classes	N/A
Packing Group Number	N/A
Cargo Packing Instructions	N/A
Passenger Packing Instruction	N/A
Environmental Hazard	N/A

SECTION 15: REGULATORY INFRMATION (NON-MANDATORY)

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

US. Toxic Substances Control Act

All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30

European Inventory of Existing Commercial Chemical Substances (EINECS)

Components of this product are not listed on EINECS because they are polymers or "no-longer polymers" marketed before the enforcement of the 7th Amendment to Directive 67/548/EEC.

Other regulations

Reaction product: Bisphenol A-(epichlorohydrin); epoxy resin (number average molecular weight <= 700) can also be described by the CAS# 025085-99-8.

Chemical Safety Assessment

A Chemical Safety Assessment has been carried out for this substance

SECTION 16: OTHER INFORMATION

Date Prepared	05/18/2016
Last Revision	n/a
Changes Since Last Revision	n/a

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Safety Data Sheet

MAX TCR A/B SDS- GHS COMPLIANT

SECTION 1: IDENTIFICATION

Product/Chemical Name **MAX TCR PART B CURING AGENT (COMPOUNDED BLEND)**

Recommended Use Amine Curing Agent

Manufacturer Information – Compounding Only
Polymer Composites, Inc.
1871 Lake Place
Ontario, CA 91761
(909) 673-1625 • Fax: (909) 673-1605

SECTION 2: HAZARD(S) IDENTIFICATION

Hazard Classification Corrosive liquid

Signal Word Danger

Hazard Statement(s) May cause an allergic skin reaction, may cause eye irritation.

Pictogram(s)

GHS Classification

Acute toxicity	Oral – Category 4
Acute toxicity	Dermal – Category 1
Skin corrosion	Category 1B
Skin sensitization	Category 1

GHS Label elements, including precautionary statements

Health Hazards:	H302 + H312	Harmful if swallowed or in contact with skin
	H314	Causes severe skin burns and eye damage
	H317	May cause an allergic skin reaction
Prevention Precautions	P261	Avoid breathing dust/fume/gas/mist/vapors/spray
	P264	Wash hands thoroughly after handling
	P270	Do not eat, drink, or smoke when using this product.
	P272	Contaminated work clothing should not be allowed out of the workplace
	P280	Wear protective gloves/protective clothing/eye protection/face protection
Response Precautions	P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
	P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
	P303 + P361 + 353	IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower
	P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
	P305 + 351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P310	Immediately call a POISON CENTER or doctor/physician.
	P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
	P363	Wash contaminated clothing before reuse.
Storage	P405	Store locked up
Disposal Precautions	P501	Dispose of contents/container to be specified in accordance with regulations

Hazards not otherwise classified (HNOC) or not covered by GHS:

Toxic in contact with skin
Corrosive
Moderate respiratory irritant
Severe skin irritant
Severe eye irritant
May cause sensitization by skin contact

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substances

Name	Product Identifier (CAS) and Other Unique Identifiers	Concentration
Epoxy Adduct	Proprietary	30-60%
3,3(Oxybis(2, 1 ethane-diloxy))bis 1- propanmine	Proprietary	30%-50%

SECTION 4: FIRST-AID MEASURES

Description of first aid measures

First-aid measures general	Seek medical advice. If breathing has stopped or is labored, give assisted respiration. Supplemental oxygen may be indicated. If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation immediately.
First-aid measures after inhalation	If breathing has stopped or is labored, give assisted respirations. Supplemental oxygen may be indicated If heart has stopped, trained personnel should begin cardiopulmonary resuscitated immediately. Move to fresh air.
First-aid measures after skin contact	Immediately remove contaminated clothing, and any extraneous chemical, if possible to do so without delay. Wash off immediately with plenty of water for at least 20 minutes. Cover wound with sterile dressing. Take off contaminated clothing and shoes immediately.
First-aid measures after eye contact	Rinse immediately with plenty of water and also under eyelids for at least 20 minutes. Remove contact lenses.
First-aid after ingestion	Do not induce vomiting without medical advice. Drink 1 to 3 glasses of water or milk. If a person vomits when lying on his back, place him in the recovery position. Prevent aspiration of vomit. Turn victim's head to the side.

Note to Physician

Application of corticosteroid cream has been effective in treating skin irritation.

Most important symptoms and effects, both acute and delayed

Repeated and/or prolonged exposure to low concentrations of vapors and/or aerosols may cause: sore throat, eye disease, skin disorders and allergies, adverse skin effects (such as rash, irritation, or corrosion), adverse eye effects (conjunctivitis or corneal damage), adverse respiratory effects (such as cough, tightness of chest or shortness of breath), asthma.

Indication of any immediate medical attention and special treatment needed: n/a

STEP 5: FIRE-FIGHTING MEASURES

Extinguishing media

Flammable Classification	Non-flammable
Suitable extinguishing media	Alcohol-resistant foam Carbon dioxide (CO2) Dry chemical Dry sand Limestone powder
Specific Hazards	May generate ammonia gas. May generate toxic nitrogen oxide gases. Use of water may result in formation of very toxic aqueous solutions. Do not allow run-off from fire fighting to enter drains or water courses. Incomplete combustion may form carbon monoxide Downwind personnel must be evacuated. Burning produces noxious and toxic fumes.
Unsuitable extinguishing media	Water

Advice for Firefighters

Special Protective Actions for Firefighters: Avoid contact with the skin. A face shield should be worn. Use personal protective equipment. Wear self-contained breathing apparatus for fire fighting if necessary.

Further Information

Do not allow run-off from fire fighting to enter drains or water courses.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Use self-contained breathing apparatus and chemically protective clothing. Wear suitable protective clothing, gloves, and eye/face protection. Evacuate personnel to safe areas.

Methods and materials for containment and clean up

Approach suspected leak with caution. Place in appropriate chemical waste container.

Environmental Precautions

Construct a dike to prevent spreading.

Additional Advice

If possible, stop flow of product.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Do not use sodium nitrite or other nitrosating agents in formulations containing his product. Suspected cancer-causing nitrosamines could be formed. Avoid contact with skin and eyes. Emergency showers and eye wash stations should be readily accessible. Adhere to work practice rules established by government regulations. Avoid breathing vapors and/or aerosols. Avoid contact with eyes. Use only in well-ventilated areas. Use personal protective equipment. When using, do not eat, drink, or smoke.

Conditions for safe storage, including any incompatibilities

Store in steel containers preferably located outdoors, above ground, and surrounded by dikes to contain spills or leaks. Do not store near acids. Keep containers tightly closed in a dry, cool, and well-ventilated place.

Technical Measures/Precautions

Do not store in reactive metal containers.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Measures

Provide readily accessible eye wash stations and safety showers. Provide natural or explosion-proof ventilation adequate to ensure concentrations are kept below exposure limits.

Personal Protective Measures

Respiratory Protection	Wear appropriate respirator when ventilation is inadequate
Skin Protection	Impervious clothing Full rubber suit (rain gear) Rubber or plastic boots Long sleeve shirts and trousers without cuffs. Slicker suit
Hand Protection	Neoprene gloves Butyl-rubber Nitrile rubber Impervious gloves Chemical resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
Eye/Face Protection	Full face shield with goggles underneath. Chemical resistant goggles must be worn.
Environmental Exposure Controls	Construct a dike to prevent spreading
Special Instructions for Protection and Hygiene	Discard contaminated leather articles. Remove contaminated clothing. Drenching affected area with water for at least 15 minutes. Provide readily accessible eye wash stations and safety showers.

Exposure Limit(s)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid	**Solubility**	0.1 g/l
Appearance	Clear	**Evaporation Rate**	No data available
Density	0.98 g/cm3 @ 77°F (25°C)	**Flash Point**	205°F (96°C)
Upper/Lower Flammability or Explosive Limits	No data Available or No Data Available	**Initial Boiling Point and Boiling Range**	401 (205°C)
Odor	Fishy	**Flammability (solid, gas)**	n/a
Vapor Pressure	< 0.01 nnHg at 70°F (21°C)	**Partition Coefficient**	n/a
Odor Threshold	No data available	**Auto-Ignition Temperature**	n/a
Vapor Density	5.61 g/cm^3	**Decomposition Temperature**	n/a
pH	9 Alkaline	**Viscosity**	20 mPa.s at 77°F (25°C)
Melting/Freezing Point	No data available	**Relative Density**	0.98 (water = 1)

SECTION 10: STABILITY AND REACTIVITY

Reactivity	n/a
Chemical stability	Stable under normal handling and storage conditions.
Possibility of Hazardous Reactions	n/a
Conditions to Avoid	No data available
Incompatible Materials	Sodium hypochlorite Organic acids (acetic acid, citric acid etc.) Mineral acids Product slowly corrodes copper, aluminum, zinc and galvanized surfaces. Reaction with peroxides may result in violent decomposition of peroxide possibly creating an explosion CAUTION: N-Nitrosamines, many of which are known to be potent carcinogens, may be formed when the product comes in contact with nitrous acid, nitrites or atmospheres with high nitrous oxide concentrations Nitrous acid and other nitrosating agents Oxidizing agents
Hazardous Decomposition Products	Nitric acid Ammonia Nitrogen oxide (NOx) Nitrogen oxide can react with water vapors to form corrosive nitric acid Carbon monoxide Carbon dioxide (CO^2) Nitrosamine
Possibility of Hazardous Reactions/Reactivity	No data available

SECTION 11: TOXICOLOGICAL INFORMATION

Toxicological Information

Likely Routes of Exposure

Effects on Eye	Causes eye burns. May cause blindness. Severe eye irritation.
Effects on Skin	Toxic in contact with skin. Causes skin burns.
Inhalation Effects	Can cause severe eye, skin, and respiratory tract burns. May cause nose, throat, and lung irritation. Inhalation of vapors and/or aerosols in high concentration may cause irritation of respiratory system.
Ingestion Effects	If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.
Symptoms	Repeated and/or prolonged exposure to low concentrations of vapors and/or aerosols may cause: Sore throat, eye disease, skin disorders and allergies, adverse skin effects (such as rash, irritation, or corrosion), adverse eye effects (such as conjunctivitis or corneal damage), adverse respiratory effects (such as cough, tightness of chest or shortness of breath), asthma.

Acute Toxicity

Acute Oral Toxicity	LD50: 2369 mg/kg Species: Rat
Inhalation	No data available
Acute Dermal Toxicity	LD50: 2,000 mg/kg Species: Rabbit
Skin Corrosion/Irritation	Severe skin irritation
Serious Eye Damage/Eye Irritation	Severe eye irritation
Sensitization	May cause sensitization by skin contact. Sensitization has occurred in laboratory animals after repeated exposures.

Chronic Toxicity or Effects From Long Term Exposures

Carcinogenicity	No data available
Reproductive Toxicity	No data available
Germ Cell Mutagenicity	Results from a battery of short term genotoxicity tests on this material or its components indicate mutagenic activity.
Specific Target Organ Systemic Toxicity (single exposure)	No data available
Specific Target Organ Systemic Toxicity (repeated exposure)	No data available
Aspiration Hazard	No data available

Delayed and Immediate Effects and Chronic Effects from Short and Long Term Exposure

This product contains no listed carcinogens according to IARC, ACGIH, NTP and/or OSHA in concentrations of 0.1 percent or greater. Prolonged contact my result in chemical burns and permanent damage. Repeated or prolonged contact causes sensitization, asthma, and eczemas, eye disease, skin disorders and allergies, adverse skin effects (such as rash, irritation, or corrosion), adverse eye effects (such as conjunctivitis or corneal damage), adverse respiratory effects (such as cough, tightness of chest or shortness of breath), asthma.

SECTION 12: ECOLOGICAL INFORMATION (NON-MANDATORY)

Ecotoxicity Effects

Aquatic Toxicity	No data available
Toxicity to Other Organisms	No data available

Persistence and Degradability

Bioaccumulative Potential	n/a
Mobility in Soil	n/a
Biodegradability	n/a

SECTION 13: DISPOSAL CONSIDERATIONS (NON-MANDATORY)

Waste From Residues / Unused Product

Contact supplier if guidance is requirement

Contaminated Packaging

Dispose of container and unused contents in accordance with federal, state, and local requirements.

SECTION 14: TRANSPORT INFORMATION (NON-MANDATORY)

DOT

UN Number	UN2735
UN Proper Shipping Name	Amines Corrosive, n.o.s
Class or Division	8
Packing Group	III
Label(s)	8 (Limited Quantity)
Marine Pollutant	No

IATA

UN Number	UN2735
UN Proper Shipping Name	Amines Corrosive, n.o.s
Class or Division	8
Packing Group	III
Label(s)	8 (Limited Quantity)
Marine Pollutant	No

IMDG

UN Number	UN2735
UN Proper Shipping Name	Amines Corrosive, n.o.s
Class or Division	8
Packing Group	III
Label(s)	8 (Limited Quantity)
Marine Pollutant	No

TDG

UN Number	UN2735
UN Proper Shipping Name	Amines Corrosive, n.o.s
Class or Division	8
Packing Group	III
Label(s)	8 (Limited Quantity)
Marine Pollutant	No

Further Information
The transportation information is not intended to convey all specific regulatory data relating to this material.

SECTION 15: REGULATORY INFRMATION (NON-MANDATORY)

Additional safety, health, environmental regulations
Toxic Substance Control Act (TSCA 12(b) Component(s)

Country	Regulatory List	Notification
USA	TSCA	Included on inventory
EU	EINECS	Included on EINECS inventory or polymer substance, monomers included on EINECS inventory or no longer polymer
Canada	DSL	Included on inventory
Australia	AICS	Included on inventory
Japan	ENCS	Included on inventory
South Korea	ECL	Included on inventory
China	SEPA	Included on inventory
Philippines	PICCS	Included on inventory

EPA SARA Title III Section 312 (40 CFR 370) Hazard Classification ; Acute Health Hazard Chronic Health Hazard
EPA SARA Title III Section 313 (40 CFR 372) Component(s) above 'de minimus' level: None
US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)
This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other harm.

SECTION 16: OTHER INFORMATION

HMIS Rating

Health	2
Flammability	1
Physical Hazard	0

Disclaimer:

The information contained in this Safety Data Sheet (SDS) is considered accurate as of the version date. However, no warranty is expressed or implied regarding the accuracy of the data. Since the use of this product is not within the control of Polymer Composites Inc., it is the user's obligation to determine the suitability of the product for its intended application and assumes all risk and liability for its safe use. This SDS is prepared to comply with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS) as prescribed by the United States (US) Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29 CFR 1910.1200), the Canadian Workplace Hazardous Materials Information System (WHMIS), and European Union Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 (REACH). Classifications of the chemical in accordance with 29 CFR 1910.1200, signal word, hazard and precautionary statement(s), symbol(s) and other information are based on listed concentration of each hazardous ingredient. Unlisted ingredients are not "hazardous" per the OSHA Hazard Communication Standard (29 CFR 1910.1200), WHMIS and EC No 1907/2006 and are considered trade secrets under US Federal Law (29 CFR and 40 CFR), Canadian Law (Health Canada Legislation), and European Union Directives.

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