Section 1: Identification

PRODUCT INDENTIFIER: EPOXY HARDENER

CHEMICAL FAMILY: polyether, amine CAS Number – 9046-10-0

EMERGENCY PHONE: CHEMTREC 800-424-9300 (US) Day or night

Customer No. 16568

MANUFACTURER:
PACE Technologies
3601 E. 34th St., Tucson, AZ 85718
Tucson, Arizona USA
Phone: +1 520-882-6598
FAX: +1 520-882-6598

Section 2: Hazard(s) Identification

GHS CLASIFICATION:	Acute toxicity, 4, H302 Acute toxicity, 2, H330 Acute toxicity, 4, H312 Skin corrosion, 1B, H314 Skin sensitization, 1, H317 Specific target organ toxicity - single exposure, 3, Respiratory system, H335
PICTOGRAM(s):	
SIGNAL WORD:	Danger
HAZARD STATEMENTS:	**Hazard Statement(s):** H302-Harmful if swallowed H312 – Harmful in contact with skin H314-Causes severe skin burns and eye damage H317-May cause an allergic skin reaction H330-Fatal if inhaled H335-May cause respiratory irritation
PRECAUTIONARY STATEMENTS:	**Precautionary Statement(s):** **Preventions:** P260- Do not breathe P261-Avoid breathing dust/fume/gas/mist/vapors/spray. P264- Wash skin thoroughly after handling. P270- Do not eat, drink or smoke when using this product.

	P271-Use only outdoors or in a well-ventilated area P272-Contaminated work clothing should not be allowed out of the workplace P280- Wear protective gloves/protective clothing/eye protection/face protection. P284- P403+P233=Store in a well-ventilated place. Keep container tightly closed. **Response:** P301+312- IF SWALLOWED: call a POISON CENTER or doctor/physician IF you feel unwell. P301+P330+P331- IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P302+352- IF ON SKIN: wash with plenty of soap and water. P304+P340- IF INHALED: Remove victim to fresh air and Keep at rest in a position comfortable for breathing. P305+P351+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. P312- Call a POISON CENTER or doctor/physician if you feel unwell. P320- Specific treatment is urgent (Remove victim to fresh air and provide oxygen if breathing is difficult. Give artificial respiration if not breathing. Get medical attention). P321- Specific treatment (Immediately flush eyes with plenty of water for 15 minutes while holding eyelids open. Rinse continuously with water while on way to get medical attention). P322- Specific measures (Immediately remove contaminated clothing or shoes, wipe excess from skin and flush with plenty of water for at least 15-minutes. Use soap if available or follow by washing with soap and water). P333+P313-IF SKIN irritation or rash occurs: Get medical advice/attention. P330- Rinse mouth. P363- Wash contaminated clothing before reuse. **Storage:** P403+P233-Store in a well-ventilated place. Keep container tightly closed. P405-Store locked up **Disposal:** P501- Dispose of contents/container to Federal, State and Local Regulations. .

Section 3: Composition/Information on Ingredients

CHEMICAL NAME	CAS NO.	%
alpha-(2-Aminomethylethyl)-omega-(2-aminomethylethoxy)-poly(oxy(methyl-1,2-ethanediyl))	9046-10-0	90-100%
Polyethylenepolyamine (Proprietary)		5-10%

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Section 4: First-Aid Measures

INHALATION: Remove victim to fresh air and provide oxygen if breathing is difficult. Give artificial respiration if not breathing. Get medical attention.

SKIN CONTACT: Immediately remove contaminated clothing or shoes, wipe excess from skin and flush with plenty of water for at least 15-minutes. Use soap if available or follow by washing with soap and water. Do not reuse clothing until thoroughly cleaned. Get medical attention.

EYE CONTACT: Immediately flush eyes with plenty of water for 15 minutes while holding eyelids open. Rinse continuously with water while on way to get medical attention.

INGESTION: Do not induce vomiting. Give one glass of water unless victim is drowsy, convulsing, or unconscious. Seek medical attention immediately.

NOTES TO PHYSICIAN

SYMPTOMS: Irritation as noted above. Lung damage (scarring, bronchitis, emphysema) may be evidenced by shortness of breath, especially on exertion, and may be accompanied by chronic cough. Skin sensitization (allergy) may be evidenced by rashes, especially hives.

Section 5: Fire-Fighting Measures

SUITABLE EXTINGUISHING MEDIA: Use water fog, “alcohol foam”, dry chemical or carbon dioxide.

Water or fog may cause frothing which can be violent, especially if sprayed into containers of hot or burning liquid.

SPECIFIC HAZARDS DURING FIRE FIGHTING: Material will not burn unless preheated. Delayed lung damage (pulmonary edema) can be experienced after exposure to combustion products, sometimes hours after the exposure. Nitrogen oxides and other potentially hazardous nitrogen-containing compounds may be released upon combustion.

Cool fire exposed containers with water.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS: Do not enter confined fire space without full bunker gear (helmet with face shield, bunker coats, gloves and rubber boots), including a positive pressure NIOSH approved self-contained breathing apparatus.

Section 6: Accidental Release Measures

PERSONNEL PRECAUTIONS: Corrosive.

Prevent all bodily contact with spilled material.
Shut off leaks, if possible without personal risk.
Remove ignition sources.

ENVIRONMENTAL PRECAUTIONS: Dike and contain.
Contain run-off and dispose of properly.
Prevent from entering into drains, ditches or rivers.

CLEAN-UP METHODS – SMALL SPILLAGE: Take up with an absorbent material and place in non-leaking containers.
Seal tightly for proper disposal.

CLEAN-UP METHODS – LARGE SPILLAGE: Remove with vacuum trucks or pump to storage/salvage vessels.
Soak up residue with an absorbent such as clay, sand or other suitable material; place in non-leaking containers for proper disposal.
Flush area with water to remove trace residue.

ADDITIONAL ADVICE: Notify authorities if any exposures to the general public or environment occurs or is likely to occur.
See Section 13 for information on disposal.

Section 7: Handling and Storage

ADIVCE ON SAFE HANDLING: Do not pressurize drum containers to empty them. Heating this curing agent above 300 Deg. F in the presence of air may cause slow oxidative decomposition; above 500 Deg. F, polymerization may occur. Some epoxy resins can produce exothermic reactions which in large masses can cause runaway polymerization and charring of the reactants. Fumes and vapors from these thermal and chemical decompositions vary widely in composition and toxicity. Do not breathe fumes. Use a NIOSH-approved respirator as required to prevent overexposure. In accord with 29 CFR.1910.134, use either an atmosphere-supplying respirator or an air-purifying respirator for organic vapors.

STORAGE:

REQUIREMENTS FOR STORAGE AREAS AND CONTAINERS: Store in a cool, dry place with adequate ventilation. Keep away from open flames and high temperatures.

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Section 8: Exposure Controls/ Personal Protection

PROTECTIVE MEASURES: Wear appropriate respirator and full-body protective clothing.

ENGINEERING MEASURES: Use ventilation as required to control vapor concentrations. Eye wash fountains and safety showers should be available for emergency use.

EYE PROTECTION: Do not get in eyes.
Wear chemical goggles if there is potential contact with eyes.

SKIN AND BODY PROTECTION: Do not get on skin, on clothing.
Wear chemical-resistant protective clothing such as gloves, outer clothing or apron, overshoes and a face-shield suitable to potential exposure.

RESPIRATORY PROTECTION: Do not breathe vapors or mists.
Use a NIOSH-approved respirator as required to prevent overexposure.
In accord with 29 CFR 1910.134
Use either a full-face, atmosphere-supplying respirator or air-purifying respirator for organic vapors.
Avoid breathing vapors which may be produced under some conditions such as heating or applications of uncured material in large surface areas (e.g., flooring and painting).
Avoid breathing aerosols and mists which may be formed by various methods of application.

Section 9: Physical and Chemical Properties

FORM: Liquid
COLORS: Colorless

BOILING POINT: Not available

VAPOR PRESSURE: Not available

RELATIVE VAPOR DENSITY: Not available

SOLUBILITY IN WATER: Insoluble

ODOR: Amine

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RELATIVE DENSITY: 1.02

FLASH POINT: Greater than 93.4 °C (200.1 °F) Pensky-Martens Closed Cup

Section 10: Stability and Reactivity

CONDITIONS TO AVOID: Heat, flames and sparks.

MATERIALS TO AVOID: Can react vigorously with strong oxidizing agents, strong Lewis or mineral acid, and strong mineral and organic bases, especially primary and secondary aliphatic amines.
Reacts with considerable heat release with some curing agents.

HAZARDOUS DECOMPOSITON PRDUCTS: Nitrogen oxides, carbon monoxide and unidentified organic compounds may be formed during combustion.

HAZARDOUS REACTIONS: Stable under normal use conditions.
Hazardous polymerization will not occur.

Section 11: Toxicological Information

ACUTE TOXICITY:

Ingredient Name:	LD50	Animal	Concentration
alpha-(2-Aminomethylethyl)-omega-(2-aminomethylethoxy)-poly(oxy(methyl-1,2-ethanediyl))	Oral Dermal	Rat Rabbit	480-2880 mg/kg 1560-2980 mg/kg

Primary Irritant Effect

Ingredient Name:	
Skin:	Corrosive
Eye:	Risk of serious damage to eyes
Sensitization:	Non-sensitizing
Additional toxicological information:	No experimental evidence available for genotoxicity in vitro (Ames test negative.

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Section 12: Ecological Information

ELIMINATION INFORMATION (PERSISTENCE AND DEGRADABILITY)

BIODEGRADABILITY: No data available

ECOTOXICITY EFFECTS

TOXICITY TO AQUATIC PLANTS: No data available concerning toxicity for algae

Section 13: Disposal Considerations

If this material becomes a waste, it would not be a hazardous waste by RCRA criteria (40 CFR 261). Place in an appropriate disposal facility in compliance with local and federal regulations.

Section 14: Transportation Information

Not regulated

Section 15: Regulatory Information

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

NOTIFICATION STATUS

AICS: Listed

DSL: Listed

INV (CN): Listed

DCS (JP): Listed

TSCA: Listed

EINECS: Listed

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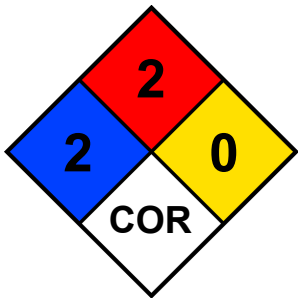
KECI (KR):	Listed
PICCS (PH):	Listed
NOTIFICATION STATUS LEGEND	y=Yes (Listed); AICS = Australian Inventory of Chemical Substances; DSL = Canadian Domestic Substances List; INV (CN) = Inventory of Existing Chemicals Substances in China; ENCS (JP) = Japanese Existing and New Chemical Substances; TSCA = Toxic Substances Control Act; EINECS = European Inventory of New and Existing Chemicals; KECI (KR) = Korean Existing Chemicals Inventory; PICCS (PH) = Philippine Inventory of Chemicals and Chemical Substances

Section 16: Other Information

16.1 NFPA 704



Top, Flammability: 2 – Moderate Hazard

Left, Health Hazard: 2 – Moderate Hazard

Right, Reactivity: 0 – Minimal Hazard

Bottom, Special Notice: COR- Corrosive

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