

SAFETY DATA SHEET

POLYMER STEEL SG HARDENER

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: POLYMER STEEL SG HARDENER

PRODUCT CODE: #PSSGHARD

PRODUCT USE: Hardener for 2 component epoxy coatings

MANUFACTURER

DUDICK, a DIVISION OF CARBOLINE GLOBAL
INC.

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24 HR. EMERGENCY TELEPHONE NUMBER

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2. HAZARDS IDENTIFICATION

CLASSIFICATION:

Acute Toxicity - Dermal - Category 4

Acute Toxicity - Oral - Category 4

Serious Eye Damage/Eye Irritation - Category 1

Skin Corrosive - Category 1B

Skin Sensitizer - Category 1

GHS LABEL ELEMENTS:



SIGNAL WORD: Danger

HAZARD STATEMENTS:

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.

PRECAUTIONARY STATEMENTS :

P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P264 Wash all contacted body parts thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

Specific treatment is urgent (see Section 4 of this SDS).

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P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P363 Wash contaminated clothing before reuse.
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.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P501 Dispose of contents/container in accordance with local, regional, and federal regulations.

3. COMPOSITION/INFORMATION ON HAZARDOUS INGREDIENTS

Chemical Name	Weight %	CAS Number
Triethylenetetramine	40% to 60%	112-24-3
1,4-Diazabicyclooctane	10% to 15%	280-57-9

No further information available for this product.

4. FIRST AID MEASURES

EYES: Wash immediately and continuously with flowing water for at least 30 minutes. Remove contact lenses after the first 5 minutes and continue washing. Obtain prompt medical consultation, preferably from an ophthalmologist. Suitable emergency eye wash facility should be immediately available.

SKIN: Immediate continued and thorough washing in flowing water for at least 30 minutes is imperative while removing contaminated clothing. Prompt medical consultation is essential. Wash clothing before reuse. Properly dispose of leather items such as shoes, belts, and watchbands. Suitable emergency safety shower facility should be immediately available.

INGESTION: Do not induce vomiting. Give one cup (8 ounces or 240 ml) of water or milk if available and transport to a medical facility. Do not give anything by mouth unless the person is fully conscious.

INHALATION: If inhaled, remove to fresh air and keep at rest in a position comfortable for breathing. Obtain medical attention if breathing difficulty persists.

NOTES TO PHYSICIAN: NOTE TO PHYSICIANS: Application of corticosteroid cream has been effective in treating skin irritation.

Chemical eye burns may require extended irrigation. Obtain prompt consultation, preferably from an ophthalmologist. If burn is present, treat as any thermal burn, after decontamination. Due to irritant properties, swallowing may result in burns/ulceration of mouth, stomach and lower gastrointestinal tract with subsequent stricture. Aspiration of vomitus may cause lung injury. Suggest endotracheal/esophageal control if lavage is done. No specific antidote.

5. FIRE FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA: Alcohol resistant foam; Carbon Dioxide (CO₂); dry chemical; dry sand; limestone powder; use water to keep containers cool.

UNSUITABLE EXTINGUISHING MEDIA: Do not use high pressure water jet as this may spread the area of the fire.

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SPECIFIC HAZARDS IN CASE OF FIRE: Burning may produce noxious and toxic fumes. Incomplete combustion may form carbon monoxide. May generate ammonia gas. May generate toxic nitrogen oxide gasses. Downwind personnel should be evacuated.

Heat is generated when product mixes with water. 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.

SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTION FOR FIRE FIGHTERS: Wear self-contained breathing apparatus (SCBA) in positive pressure mode and full protective clothing.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Isolate area; ensure adequate ventilation; remove all sources of ignition; use appropriate personal protection equipment; avoid breathing mist, vapors, spray; avoid contact with skin, eyes and clothing; keep unnecessary and unprotected personnel from entering the involved area.

ENVIRONMENTAL PRECAUTIONS: Halt the flow of material as soon as practical using appropriate barriers; Prevent contamination of soil and water. Prevent from spreading or entering into drains, ditches, waterways by using sand, earth or appropriate barriers.

METHOD AND MATERIALS FOR CONTAINMENT AND CLEANING UP: Soak up with sand, earth, diatomaceous earth or other suitable inert absorbent material; collect into suitable waste disposal containers. Wash spillage site with large amounts of water. Dispose of in accordance with applicable local and federal environmental control laws and regulations.

7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING: Use only in well-ventilated areas. Avoid contact with skin and eyes. Avoid breathing vapors and/or aerosols. Emergency showers and eye wash stations should be readily accessible. Use personal protective equipment. When using, do not eat, drink or smoke.

CONDITIONS FOR SAFE STORAGE, INCLUDING INCOMPATIBILITIES: Do not store near incompatibles (strong oxidizers, acids, alkalis). Do not store near excessive heat or near sources of ignition. Keep container tightly closed when not in use.

8. EXPOSURE CONTROLS\PERSONAL PROTECTION

EXPOSURE LIMITS

Components	CAS	Limits
Triethylenetetramine	112-24-3	WEEL; TWA 1.0 ppm
1,4-Diazabicyclooctane	280-57-9	

ENGINEERING CONTROLS: Ventilation:

Use local exhaust ventilation, or other engineering controls to maintain airborne levels requirements or guidelines.

General ventilation may not be sufficient.

PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY PROTECTION: If ventilation is inadequate or if irritation or other symptoms are experienced, wear a NIOSH/MHSA approved respirator with organic vapor cartridge.

EYES PROTECTION: Full face shield with goggles underneath.

SKIN PROTECTION: Impervious clothing. Rubber or plastic boots.

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. Consult glove manufacturer for recommendations.

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WORK HYGIENIC PRACTICES: Use good personal hygiene. Do not consume or store food in the work area. Wash hands before smoking or eating. Wash contaminated clothing before reuse. Eye wash stations and emergency showers should be available.

OTHER USE PRECAUTIONS: The type and degree of personal protective equipment will depend on the specific work operation. Eye wash stations and emergency showers should be available. Inspect and replace personal protective equipment at regular intervals; use professional care in their selection, use and care.

COMMENTS: None.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Liquid

COLOR: Pale amber

FLASH POINT AND METHOD: 148 °C CC

AUTO-IGNITION TEMPERATURE: Not Determined.

BOILING POINT/RANGE: 277 °C

MELTING POINT: Not Determined.

VAPOUR PRESSURE: Not determined.

VAPOUR DENSITY: Heavier than air.

SOLUBILITY: 100% @ 20°C

ODOR/THRESHOLD: Amine-like.

LOWER / UPPER FLAMMABLE LIMITS: No data available for this product. TO No data available for this product.

DENSITY: 1.0382

EVAPORATION RATE: Slower than ether.

PARTITION COEFFICIENT: Not determined.

pH: >11.5 [Conc. (% w/w): 1%]

DECOMPOSITION TEMPERATURE: Not determined.

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: This product is stable under normal storage conditions.

POSSIBILITY OF HAZARDOUS REACTIONS: Will not occur under normal conditions.

CONDITIONS TO AVOID: Exposure to elevated temperatures can cause product to decompose. Generation of gas during decomposition can cause pressure in closed systems. Reaction with carbon dioxide may form an amine carbamate. Smoke may be generated depending on vapor pressure of mixture. Product absorbs carbon dioxide from the air.

MATERIALS TO AVOID: Heat is generated when mixed with water. Spattering and boiling can occur. Avoid contact with oxidizing materials. Avoid contact with: Acids. Acrylates. Alcohols. Aldehydes. Halogenated hydrocarbons. Ketones. Nitrites. Avoid contact with metals such as: Brass. Bronze. Copper. Copper alloys. Avoid contact with absorbent materials such as: Ground corn cobs. Moist organic absorbents. Peat moss. Sawdust.

HAZARDOUS DECOMPOSITION PRODUCTS: Nitric acid. Ammonia Nitrogen oxides (NO_x). Nitrogen oxide can react with water vapors to form corrosive nitric acid.

Carbon monoxide. Carbon dioxide (CO₂).

Aldehydes. Flammable hydrocarbon fragments.

Organic acid vapors.

11. TOXICOLOGICAL INFORMATION

SIGNS AND SYMPTOMS OF OVEREXPOSURE:

ACUTE EFFECTS:

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EYE CONTACT: Causes eye burns. May cause blindness. Corneal edema may give rise to a perception of "blue haze" or "fog" around lights. Exposed individuals may see rings around bright lights. This effect is temporary and has no known residual effect. Product vapor can cause glaucoma (corneal edema) when absorbed into the tissue of the eye from the atmosphere.

SKIN CONTACT: Causes skin burns.

Has caused allergic skin reactions in humans. Contains component(s) which have demonstrated the potential for contact allergy in mice.

INHALATION: Inhalation of vapors and/or aerosols in high concentration may cause irritation of respiratory system. Inhalation of aerosol may cause irritation to the upper respiratory tract. May cause nose, throat, and lung irritation. Can cause severe eye, skin and respiratory tract burns.

INGESTION: Harmful if swallowed. If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.

TARGET ORGAN: Specific Target Organ Systemic Toxicity (Single Exposure)

Material is corrosive. Material is not classified as a respiratory irritant; however, upper respiratory tract irritation or corrosivity may be expected.

Specific Target Organ Systemic Toxicity (Repeated Exposure)

In animals, effects have been reported on the following organs:

Lung.

CHRONIC EFFECTS: This product contains no listed carcinogens according to IARC, ACGIH, NTP and/or OSHA in concentrations of 0.1 percent or greater. May cause allergic skin reaction, eye disease, skin disorders and allergies.

TOXICITY VALUES: Acute oral toxicity

LD50, Rat, male and female, 1,716 mg/kg

Acute dermal toxicity

Prolonged or widespread skin contact may result in absorption of potentially harmful amounts.

LD50, Rabbit, 1,465 mg/kg

12. ECOLOGICAL INFORMATION

PERSISTENCE AND DEGRADABILITY:

Biodegradability:

Biodegradation under aerobic static laboratory conditions is moderate (BOD20 or BOD28/ThOD between 10 and 40%).

10-day Window: Fail

Biodegradation: 0 %

Exposure time: 20 d

Method: OECD Test Guideline 301D or Equivalent

Theoretical Oxygen Demand: 3.40 mg/mg

Chemical Oxygen Demand: 1.94 mg/mg

Biological oxygen demand (BOD)

Incubation

Time BOD

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5 d 5.000 %
20 d 2.5 - 11 %

Photodegradation

Sensitizer: OH radicals

Atmospheric half-life: 0.55 Hour

Method: Estimated.

BIO-ACCUMULATIVE POTENTIAL:

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Partition coefficient: n-octanol/water(log Pow): -2.65 Estimated.

MOBILITY IN SOIL:

Mobility in soil

Potential for mobility in soil is very high (Koc between 0 and 50).

Partition coefficient(Koc): 4.1 - 310 Estimated.

OTHER ADVERSE EFFECTS:

Not known.

ECOTOXICOLOGICAL OTHER INFORMATION:

Acute toxicity to fish

Material is slightly toxic to aquatic organisms on an acute basis (LC50/EC50 between 10 and 100 mg/L in the most sensitive species tested).

May increase pH of aquatic systems to > pH 10 which may be toxic to aquatic organisms.

LC50, Pimephales promelas (fathead minnow), static test, 96 Hour, 330 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates

EC50, Daphnia magna (Water flea), static test, 48 Hour, 31.1 mg/l, OECD Test Guideline 202 or Equivalent

Acute toxicity to algae/aquatic plants

EC50, Pseudokirchneriella subcapitata (green algae), semi-static test, 72 Hour, Growth rate inhibition, 20 mg/l, OECD Test Guideline 201 or Equivalent

Toxicity to bacteria

EC50, Bacteria, 16 Hour, 680 mg/l

Chronic aquatic toxicity

Chronic toxicity to aquatic invertebrates

NOEC, Daphnia magna (Water flea), semi-static test, 21 d, number of offspring, 1.9 mg/l

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Dispose of according to local, state, and federal regulations through a licensed disposal facility.

14. TRANSPORT INFORMATION

UN NUMBER: 2259

UN PROPER SHIPPING NAME: Amines, liquid, corrosive, n.o.s., (Triethylenetetramine)

TRANSPORT HAZARD CLASS:

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TRANSPORT HAZARD SUBCLASS:

Not applicable.

PACKING GROUP: II

MARINE POLLUTANT Y/N:

No

SPECIAL PRE-CAUTIONS: None

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15. REGULATORY INFORMATION

U.S. REGULATIONS:

All components of this product are listed on or exempt from the TSCA Inventory.

U.S. SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

311/312 HAZARD CATEGORIES:

- FIRE:** No
- PRESSURE GENERATING:** No
- REACTIVITY:** No
- ACUTE:** Yes
- CHRONIC:** No

313 REPORTABLE INGREDIENTS:

313 REPORTABLE INGREDIENTS

302/304 EMERGENCY PLANNING

EMERGENCY PLAN: No reportable components

STATE REGULATIONS:

No components are known to be on the California Proposition 65 list.

Massachusetts Right To Know Components

Chemical Name	CAS
Triethylenetetramine	112-24-3

Pennsylvania Right To Know Components

Chemical Name	CAS
Triethylenetetramine	112-24-3
1,4-Diazabicyclooctane	280-57-9

New Jersey Right To Know Components

Chemical Name	CAS
Triethylenetetramine	112-24-3
1,4-Diazabicyclooctane	280-57-9

OTHER GOVT. REGULATIONS: No other information available

16. OTHER INFORMATION

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