

	MATERIAL SAFETY DATA SHEET	
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Absorbed through skin: N/A

Swallowed: Not likely to occur in typical industrial environments however ingestion of this material may be harmful or fatal.

SUSPECTED CANCER AGENT?

NO: This product's ingredients are not found in the lists below.

YES: Federal OSHA NTP IARC

-----IV. FIRST AID: EMERGENCY PROCEDURES-----

Eye Contact: Hold eyelids apart and immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

Skin Contact: Remove product and immediately flush affected area with water for at least 15 minutes. Call a physician. Except in the most minor, superficial and localized burns, cover the affected area with a sterile dressing or clean sheeting and transport for medical care. **DO NOT APPLY GREASES OR OINTMENTS.** Control shock, if present. Launder contaminated clothing prior to reuse. Contaminated leather wear should be discarded. Victims of a major skin area contact should remain under medical observation for at least 24 hours due to possible delayed effects.

Inhaled: If breathing has stopped or is labored give assisted respiration (e.g. mouth-to-mouth). Supplemental oxygen may be indicated. Prevent aspiration of vomit. Turn victim's head to the side. Assure mucus does not obstruct airway. Call a physician

Swallowed

In the event of ingestion, **DO NOT INDUCE VOMITING.** Obtain medical care and hospital treatment immediately.

----- V. FIRE AND EXPLOSION -----

Flash Point method): 350°F (Cleveland Open Cup)

Auto ignition temperature, °F:

Flammable limits in air, volume %: Lower (LEL) _____ Upper (UEL)

Fire extinguishing materials:

water spray carbon dioxide other:
 foam dry chemical

Special fire fighting procedures: NFPA class II of HMIS class I rating. Wear full protective gear and NIOSH/MSHA approved self-contained breathing apparatus. Retain expended liquids from fire fighting for later disposal.

Unusual fire and explosion hazards: N/A

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----- VI. SPILL, LEAK, AND DISPOSAL PROCEDURES -----

Spill response procedures (include employee protection measures): Dam and absorb spill with absorbent materials, minimize breathing vapors. Increase ventilation. Wear impervious gloves, safety goggles, and NIOSH approved organic vapor canister type respirator.

Preparing wastes for disposal (container types, neutralization, etc.): Absorb spill on sand, earth, or vermiculite. Carefully collect into closed containers for disposal. Wash spill area with 5% acetic acid then flush with water. Do not sewer. NOTE: Dispose of all wastes in accordance with federal, state and local regulations.

-----VII. Handling and Storage-----

Store in cool dry area.

----- VIII. Exposure Controls and Personal Protection -----

Ventilation and engineering controls: General ventilation should be adequate.

Respiratory protection (type): In confined areas, a NIOSH approved organic vapor canister type respirator should be worn.

Eye protection (type): Chemical splash proof goggles.

Gloves (specify material): Nitrile rubber gloves. In emergency situations, wear impermeable gloves with cuffs to prevent spread of material to area above the wrists.

Other clothing and equipment: Long sleeved shirt and long trousers

Work practices, hygienic practices: Wash at the end of each work shift and before eating, smoking or using the toilet. Launder or discard contaminated clothing. Discard contaminated leather articles. Examine protective gloves before using. Discard if find evidence of holes or cracks

Other handling and storage requirements: N/A

Protective measures during maintenance of contaminated equipment: See above.

----- IX. PHYSICAL PROPERTIES -----

Vapor density (air=1): N/A

Melting point or range, °F: N/A

Specific gravity: 0.99

Boiling point or range, °F: N/A

Solubility in water: slightly soluble

Evaporation rate (butyl acetate = 1): N/A

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Vapor pressure, mmHg at 20°C: N/A

Appearance and odor: Amber colored liquid with amine odor

HOW TO DETECT THIS SUBSTANCE (warning properties of substance as a gas, vapor, dust, or mist):

----- X. REACTIVITY DATA -----

Stability: x Stable Unstable

Conditions to avoid: N/A

Incompatibility (materials to avoid): Oxidizing Agents (i.e. perchlorates, nitrates etc.). Cleaning solutions, such as chromerge (sulfuric acid/dichromate) and aqua regia. a reaction accompanied by large heat release occurs when the product is mixed with acids.

Hazardous decomposition products (including combustion products): (from burning, heating, or reaction with other materials). Carbon monoxide, carbon dioxide, oxides of nitrogen.

Hazardous polymerization: May occur x Will not occur

Conditions to avoid: N/A.

-----XI. Toxicology Information-----

Polyamide resin – Oral (Rat) LD50 >2000mg/kg Irritation data skin- rabbit: >660mg/kg corrosive eye – rabbit: severe

-----XII. Ecological Information-----

LC50 (24 h) :222 mg/l Species : Rainbow trout (Oncorhynchus mykiss). LC100 (96 h) :240 mg/l Species :Rainbow trout (Oncorhynchus mykiss). LC0 (96 h) :180 mg/l Species :Rainbow trout (Oncorhynchus mykiss). LC50 (24 h) :249 mg/l Species :Carp (Cyprinus carpio). LC50 (96 h): 175 mg/l Species : Carp (Cyprinus carpio). EC50(96h):718mg/l Species : Grass shrimp (Palaemonetes). EC100 (96 h): 1,000 mg/l Species : Mud crab (Neopanope). EC0 (96 h): 750 mg/l Species : Mud crab (Neopanope). EC50 (72 h): 84 mg/l Species: Scenedesmus subspicatus

Toxicity to other organisms : No data available.

Persistence and degradability

Biodegradability : According to the results of tests of biodegradability this product is not readily biodegradable.

Mobility : No data available.

Bioaccumulation : No data is available on the product itself.

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-----XIII. Disposal Information-----
 Dispose in compliance with local, state, and federal regulations.

-----XIV. Transport Information-----

DOT
 DOT Proper Shipping Name: Amines liquid Corrosive, n.o.s
 Technical Name (tetraethylenepentamine and Tris-2,4,6-(dimethylaminomethyl)phenol))
 Hazard Class: 8
 UN/ID Number: UN2735
 Packing Group II .

For material in inner packagings not over 1 liter (0.3 gallon) can be classified Consumer Commodity ORM-D.

IATA
 Proper Shipping Name: Amines liquid Corrosive, n.o.s
 Technical Name (tetraethylenepentamine and Tris-2,4,6-(dimethylaminomethyl)phenol))
 Hazard Class: 8
 UN/ID Number: UN2735
 Packing Group II .

IMDG
 Proper Shipping Name: Amines liquid Corrosive, n.o.s
 Technical Name (tetraethylenepentamine and Tris-2,4,6-(dimethylaminomethyl)phenol))
 Hazard Class: 8
 UN/ID Number: UN2735
 Packing Group II

TDG
 Proper Shipping Name: Amines liquid Corrosive, n.o.s
 Technical Name (tetraethylenepentamine and Tris-2,4,6-(dimethylaminomethyl)phenol))
 Hazard Class: 8
 UN/ID Number: UN2735
 Packing Group II

-----XV. Regulatory Information-----

All ingredients are listed on the U.S. EPA TSCA inventory of chemical substances.
 SARA Section 311/312 Hazard Classification: Immediate (Acute) Health, Delayed (chronic) Health.

W.H.M.I.S. Code E

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-----XVI Other Information-----

This information is furnished without warranty, representation, inducement or license of any kind; except that it is accurate to the best of our knowledge, or obtained from sources believed by us to be accurate.

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Swallowed: Causes gastrointestinal irritation and possible burns if swallowed
 SUSPECTED CANCER AGENT?

NO: This product's ingredients are not found in the lists below.

YES: Federal OSHA NTP IARC

-----IV. FIRST AID: EMERGENCY PROCEDURES-----

Eye Contact: Hold eyelids apart and immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

Skin Contact: Contact will probably cause no more than irritation. Wash off in flowing water or shower. Wash clothing before reuse.

Inhaled: If inhaled, remove to fresh air. If effects occur consult a physician
 Swallowed Do not induce vomiting. Call a physician

----- V. FIRE AND EXPLOSION -----

Flash Point method): 245[□]F method used = PMCC

Auto ignition temperature, °F: N/A

Flammable limits in air, volume %: Lower (LEL) Upper (UEL)

Fire extinguishing materials:
 water spray carbon dioxide other:
 foam dry chemical

Special fire fighting procedures: Wear positive pressure self contained breathing apparatus

Unusual fire and explosion hazards: None known.

----- VI. SPILL, LEAK, AND DISPOSAL PROCEDURES -----

Spill response procedures (include employee protection measures): Soak up in absorbent material or scrape up. Residual can be removed with hot water and a nonionic surfactant. Wear goggles, rubber gloves, long sleeved clothing.

Preparing wastes for disposal (container types, neutralization, etc.): Burn in adequate incinerator or bury in an approved landfill.

NOTE: Dispose of all wastes in accordance with federal, state and local regulations.

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-----VII. Handling and Storage-----

Store in cool dry area.

----- VIII. Exposure Controls and Personal Protection -----

Ventilation and engineering controls: Good room ventilation should be adequate for most operations

Respiratory protection (type): None normally needed
 Eye protection (type): Chemical splash proof goggles, safety glasses

Gloves (specify material): Rubber or polyethylene gloves
 Other clothing and equipment: clean, body-covering clothing

Work practices, hygienic practices: N/A

Other handling and storage requirements: N/A

Protective measures during maintenance of contaminated equipment: See above

----- IX. PHYSICAL PROPERTIES -----

Vapor density (air=1): N/A	Melting point or range, °F: N/A
Specific gravity: 1.12	Boiling point or range, °F: N/A
Solubility in water: insoluble	Evaporation rate (butyl acetate = 1): N/A
Vapor pressure, mmHg at 20°C: N/A	VOC 0.04 lb/gal.

Appearance and odor: thick opaque liquid
 HOW TO DETECT THIS SUBSTANCE (warning properties of substance as a gas, vapor, dust, or mist):

----- X. REACTIVITY DATA -----

Stability: x Stable Unstable

Conditions to avoid: Excess heating over long periods of time degrades the resin

Incompatibility (materials to avoid): Bases

Hazardous decomposition products (including combustion products): (from burning, heating, or reaction with other materials). Incomplete pyrolysis or combustion results in phenolics, carbon monoxide, carbon dioxide, and water. Thermal decomposition should be traced as a potentially hazardous substance.

Hazardous polymerization: May occur x Will not occur

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Conditions to avoid: Masses of more than 1 pound of product plus an aliphatic amine will cause irreversible polymerization with considerable heat build up.

-----XI. Toxicology Information-----

LD 50 for skin absorption for rabbits = 20,000 mg/kg

-----XII. Ecological Information-----

None Known

-----XIII. Disposal Information-----

Dispose in compliance with local, state, and federal regulations.

-----XIV. Transport Information-----

No special labeling or transportation placarding is required.

-----XV. Regulatory Information-----

All ingredients are listed on the U.S. EPA TSCA inventory of chemical substances.

-----XVI Other Information-----

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-----IV. FIRST AID: EMERGENCY PROCEDURES-----

Eye Contact: Hold eyelids apart and immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

Skin Contact: If irritation occurs, remove affected clothing and wash the skin exposed.

Inhaled: Remove to fresh area. For extreme respiratory distress, administer oxygen.

Swallowed Refer to physician

----- V. FIRE AND EXPLOSION -----

Flash Point method): Non Flammable or combustible

Auto ignition temperature, °F: N/A

Flammable limits in air, volume %: Lower (LEL) _____ Upper (UEL)

Fire extinguishing materials:
 water spray carbon dioxide _____ other:
 foam dry chemical

Special fire fighting procedures: Wear self-contained breathing apparatus with full face piece and protective clothing.

Unusual fire and explosion hazards: This product may form explosive dust clouds in air.

----- VI. SPILL, LEAK, AND DISPOSAL PROCEDURES -----

Spill response procedures (include employee protection measures): Clean up with dustless method (use vacuum or wet sweeping). Wear NIOSH approved dust mask, safety glasses, gloves.

Preparing wastes for disposal (container types, neutralization, etc.): N/A

NOTE: Dispose of all wastes in accordance with federal, state and local regulations.

-----VII. Handling and Storage-----

Store in cool dry area.

----- VIII. Exposure Controls and Personal Protection -----

Ventilation and engineering controls: normal ventilation

Respiratory protection (type): NIOSH approved disposable dust mask if TLVL is exceeded

Eye protection (type): safety glasses

Gloves (specify material): cloth or impermeable gloves

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Other clothing and equipment: long sleeved clothing

Work practices, hygienic practices: normal good housekeeping

Other handling and storage requirements: keep away from strong alkalis and oxidizers

Protective measures during maintenance of contaminated equipment: Wear NIOSH approved dust mask, safety glasses, gloves

----- IX. PHYSICAL PROPERTIES -----

Vapor density (air=1): N/A

Melting point or range, °F: N/A

Specific gravity: 2.3

Boiling point or range, °F: N/A

Solubility in water: Insoluble

Evaporation rate (butyl acetate = 1): N/A

Vapor pressure, mmHg at 20°C: N/A

VOC: 0 lb/gal

Appearance and odor: odorless free flowing colored powder

HOW TO DETECT THIS SUBSTANCE (warning properties of substance as a gas, vapor, dust, or mist): N/A

----- X. REACTIVITY DATA -----

Stability: x Stable Unstable

Conditions to avoid: N/A

Incompatibility (materials to avoid): Exposure to hydrofluoric acid or strong alkalis or oxidizers.

Hazardous decomposition products (including combustion products): (from burning, heating, or reaction with other materials). May release carbon monoxide, carbon dioxide, nitrogen oxide, ammonia upon combustion.

Hazardous polymerization: May occur x Will not occur

Conditions to avoid: Exposure to strong oxidizers or alkalis

----- XI. Toxicology Information -----

N/A

----- XII. Ecological Information -----

N/A

----- XIII. Disposal Information -----

Dispose in compliance with local, state, and federal regulations.

----- XIV. Transport Information -----

No special labeling or transportation placarding is required.

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-----XV. Regulatory Information-----

All ingredients are listed on the U.S. EPA TSCA inventory of chemical substances.
This product contains a chemical known to the State of California to cause cancer or reproductive harm.

-----XVI Other Information-----

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