



**1. IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER**

**PRODUCT IDENTIFIER:** TEDA  
**MANUFACTURER / IMPORTER:** TOSOH SPECIALTY CHEMICALS USA, Inc.  
**ADDRESS:** 1720 Windward Concourse, Suite 125  
Alpharetta, Georgia 30005

**PHONE:** 770-442-9501

**EMERGENCY PHONE:** CHEMTREC 1-800-424-9300 OR 1-703-527-3887

**RECOMMENDED USE:** General industrial products

**2. HAZARDS IDENTIFICATION**

**GHS CLASSIFICATION**

Flammable solid Category 1  
Acute toxicity Oral: Category 4  
Eye damage/eye irritation Category 2A  
Skin corrosion/irritation Category 2

**HAZARD SYMBOL:**



**SIGNAL WORD:**

**DANGER**

**HAZARD STATEMENTS:**

Flammable solid.  
Harmful if swallowed.  
Causes skin irritation  
Causes serious eye irritation.

**PREVENTION:**

Wash thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Keep away from heat/sparks/open flames/hot surfaces – no smoking.  
Ground/bond container and receiving equipment.  
Use explosion-proof electrical/ventilating/lighting/equipment.  
Wear protective gloves/eye and face protection.



## **2. HAZARDS IDENTIFICATION (continued)**

<b>RESPONSE:</b>	<p><u>If in eyes:</u> 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. <u>If on skin (or hair):</u> Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. <u>If swallowed:</u> Immediately call a poison control center. Rinse mouth.</p>
<b>STORAGE:</b>	Store locked up.
<b>DISPOSAL:</b>	Dispose of contents/container in accordance with Federal and state regulations.

## **3. COMPOSITION/INFORMATION ON INGREDIENTS**

<u>Chemical Name</u>	<u>CAS #</u>	<u>OSHA Hazardous(Y/N)</u>	<u>Concentration (%)</u>
Triethylenediamine	280-57-9	Y	≥99

## **4. FIRST AID MEASURES**

<b>EYE CONTACT:</b>	Hold eyelids open and flush with a steady, gentle stream of water for at least 15 minutes. Seek medical attention if irritation develops or persists or if visual changes occur.
<b>SKIN CONTACT:</b>	Remove contaminated clothing and shoes. Wash with plenty of water, for at least 15 minutes. Seek medical attention if irritation develops or persists. Launder contaminated clothing and shoes before re-use.
<b>INGESTION:</b>	Do not induce vomiting. If victim is conscious and alert, give 1-2 glasses of water to drink. Do not give anything by mouth to an unconscious person. Seek immediate medical attention. Do not leave victim unattended.
<b>INHALATION:</b>	If respiratory irritation or distress occurs, remove victim to fresh air. Seek immediate medical attention.



#### **4. FIRST AID MEASURES (continued)**

**NOTES TO PHYSICIAN:**

All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred. Treat symptomatically. No specific antidote available.

#### **5. FIRE FIGHTING MEASURES**

**EXTINGUISHING MEDIA:**

Water spray, fog, dry chemical, foam, CO<sub>2</sub>

**UNUSUAL FIRE AND  
EXPLOSION HAZARDS:**

Flammable solid. Closed containers may rupture due to buildup of pressure when exposed to extreme heat.

**SPECIAL PROTECTIVE EQUIPMENT  
FOR FIRE FIGHTERS:**

Firefighters should wear NIOSH/MSHA-approved self-contained breathing apparatus and full protective clothing. Cool containers exposed to fire with water.

**HAZARDOUS DECOMPOSITION  
MATERIALS UNDER FIRE CONDITIONS:**

Oxides of carbon, oxides of nitrogen, ammonia.

#### **6. ACCIDENTAL RELEASE MEASURES**

**PERSONAL PRECAUTIONS:**

Wear appropriate protective gear for the situation. (See Personal Protection Information in Section 8).

**ENVIRONMENTAL PRECAUTIONS:**

Do not flush to drain. Spills may be reportable to the National Response Center (800-424-8802) and to state and/or local agencies.

**METHOD FOR CLEAN UP:**

Extinguish or remove all sources of ignition. Sweep up and place in an appropriate closed container. Clean up residual material by washing area with water. Collect washings for disposal. Spills may be reportable to the National Response Center (800-424-8802) and to state and/or local agencies.

#### **7. HANDLING AND STORAGE**

**PRECAUTIONS FOR SAFE HANDLING:**

Handle material with suitable protection (See Section 8). Handle with adequate ventilation. Avoid breathing dusts. Avoid contact with eyes, skin and clothing.



## **7. HANDLING AND STORAGE (continued)**

<b>VENTILATION:</b>	General area dilution/exhaust ventilation.
<b>CONDITIONS FOR SAFE STORAGE:</b>	Store upright in a cool, dry, well ventilated area out of direct sunlight. Keep away from heat, open flames and ignition sources. Keep container tightly closed. Do not reuse container.

## **8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

<b>ENGINEERING MEASURES:</b>	Set up hand-wash station and eyewash station near work area. General area dilution/exhaust ventilation.
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### **EXPOSURE LIMITS:**

Particulates, not otherwise classified, inhalable particulate	10 mg/M <sup>3</sup> – ACGIH TWA
Particulates, not otherwise regulated, total dust	15mg/M <sup>3</sup> – OSHA PEL
Particulates, not otherwise regulated, respirable fraction	5mg/M <sup>3</sup> – OSHA PEL / 3mg/M <sup>3</sup> – ACGIH TWA

### **PERSONAL PROTECTION MEASURES:**

<b><u>Respiratory protection:</u></b>	When respirators are required, select NIOSH/MSHA approved equipment based on actual or potential airborne concentrations and in accordance with regulatory standards and/or industrial recommendations. Self-contained or supplied-air respiratory equipment is recommended.
<b><u>Eye protection:</u></b>	Safety glasses with side shields, goggles or face shield are recommended.
<b><u>Skin protection:</u></b>	Skin contact should be minimized through the use of chemical-resistant gloves and boots, and suitable protective clothing.

The following general measures should be taken when working or handling this material:

- 1) Do not store, use, and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored.
- 2) Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics, or using the toilet.
- 3) Wash exposed skin promptly to remove accidental splashes of contact with this material.

## **9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>PHYSICAL STATE:</b>	Solid
<b>COLOR:</b>	White
<b>ODOR:</b>	Ammonia-like
<b>pH:</b>	11.1 (@10% aqueous)

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## **9. PHYSICAL AND CHEMICAL PROPERTIES (continued)**

<b>MELTING POINT:</b>	320F (160C)
<b>BOILING POINT:</b>	345F (174C)
<b>FLASH POINT:</b>	158F (70C)
<b>AUTOIGNITION POINT:</b>	626F (330C)
<b>EXPLOSIVE LIMITS(Lower):</b>	No data available
<b>EXPLOSIVE LIMITS(Upper):</b>	No data available
<b>VAPOR PRESSURE:</b>	<387 Pa @ 122F (50C)
<b>VAPOR DENSITY:</b>	3.87 (Air = 1)
<b>EVAPORATION RATE:</b>	No data available
<b>RELATIVE DENSITY:</b>	0.65 g/cc (bulk density)
<b>SOLUBILITY IN WATER:</b>	Soluble
<b>PARTITION COEFFICIENT:</b>	Log Pow = 0.3 @ 77F (25C)
<b>DECOMPOSITION TEMPERATURE:</b>	No data available

## **10. STABILITY AND REACTIVITY**

<b>CHEMICAL STABILITY:</b>	Material is hygroscopic, and readily absorbs water from air. This product reacts with carbon dioxide gas and crystalline salts may be formed.
<b>CONDITIONS TO AVOID:</b>	Heat, open flame, sparks.
<b>INCOMPATIBLE MATERIALS:</b>	Strong oxidizing agents, strong acids.
<b>HAZARDOUS DECOMPOSITION PRODUCTS:</b>	Oxides of carbon, oxides of nitrogen, ammonia.
<b>HAZARDOUS POLYMERIZATION:</b>	Not applicable

## **11. TOXICOLOGICAL INFORMATION**

<b>EYE CORROSION/IRRITATION:</b>	Severely irritating, rabbit.
<b>SKIN CORROSION/IRRITATION:</b>	Moderately irritating, rabbit.
<b>ACUTE TOXICITY:</b>	
<b>ACUTE ORAL TOXICITY:</b>	LD <sub>50</sub> = 1700 mg/kg, rat.
<b>ACUTE DERMAL TOXICITY:</b>	LD <sub>50</sub> > 2000 mg/kg, rat.
<b>ACUTE INHALATION TOXICITY:</b>	LC <sub>50</sub> ≥ 20.2 mg/L/1 hour, rat (tested as a 20% solution).
<b>SKIN SENSITIZATION</b>	Not a sensitizer (guinea pig).
<b>GENETIC TOXICITY</b>	Not mutagenic in the Ames test or <i>in vivo</i> mouse micronucleus test
<b>CARCINOGENICITY:</b>	This product does not contain any substances that are considered by OSHA, NTP, IARC or ACGIH to be "probable" or "suspected" human carcinogens.



## **11. TOXICOLOGICAL INFORMATION (continued)**

<b>REPRODUCTIVE TOXICITY:</b>	In a combined repeat-dose/reproductive study (OECD 422), the NOAEL (no-observed-adverse-effect level) for F0 reproductive toxicity was considered to be 300 mg/kg/day. The NOAEL for F1 neonatal toxicity was considered to be 300 mg/kg/day. The NOAEL for F0 parental systemic toxicity was considered to be 100 mg/kg/day.
<b>STOT-SINGLE EXPOSURE:</b>	Not available
<b>STOT-REPEATED EXPOSURE:</b>	In a combined repeat-dose/reproductive study (OECD 422), reversible, treatment-related effects were observed in the kidneys and bladders of mid-to-high dose animals.

## **12. ECOLOGICAL INFORMATION**

<b>ECOTOXICITY:</b>	96hr LC <sub>50</sub> > 100 mg/L (carp) 48hr EC <sub>50</sub> > 92 mg/L (daphnia magna) 72hr EC <sub>50</sub> > 110 mg/L (algae, biomass), > 180 mg/L (algae, growth rate)
<b>PERSISTENCE AND DEGRADABILITY:</b>	Not readily biodegradable
<b>MOBILITY IN SOIL:</b>	No data available

## **13. DISPOSAL CONSIDERATION (INCLUDING CONTAINER)**

<b>RESIDUAL WASTE:</b>	Chemical additions, processing or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate or otherwise inappropriate. Please be advised that state and local requirements for waste disposal may be more restrictive or otherwise different from Federal laws and regulations. Consult state and local regulations regarding the proper disposal of this material.
<b>CONTAMINATED VESSELS AND CONTAINERS:</b>	Rinse containers before disposal. Do not allow rinsate to enter the water systems. EPA Hazardous Waste = No



#### **14. TRANSPORTATION INFORMATION**

**PROPER SHIPPING NAME:** FLAMMABLE SOLID, ORGANIC N.O.S.  
(Triethylenediamine)  
**UN NUMBER:** UN1325  
**UN CLASS or DIVISION:** 4.1  
**UN PACKING GROUP:** II  
**LABELS:** Flammable  
**EMERGENCY GUIDE#:** 133

#### **15. REGULATORY INFORMATION**

**Inventory Status:** US (TSCA): Yes  
Canada (DSL): Yes  
EU (REACH): Yes  
Australia (AICS): Yes  
Japan (METI): Yes  
Korea (KECL): Yes

Where: Yes = all ingredients are listed on the inventory, Exempt = All ingredients are either on the inventory or exempt from the requirements of listing, No = Not determined, or one or more ingredients are not on the inventory and are not exempt from listing

**SARA Title III Hazard Classes:** Fire Hazard: Yes  
Reactive Hazard: No  
Release of Pressure: No  
Acute Health Hazard: Yes  
Chronic Health Hazard: No

**SARA Extremely Hazardous Substances/CERCLA Hazardous Substances:** None  
**California Proposition 65:** This product does not contain any components that are regulated under Proposition 65.

#### **16. OTHER INFORMATION INCLUDING INFORMATION ON PREPARATION AND REVISION OF THIS MSDS**

##### **National Fire Protection Association (“NFPA”) Hazard Ratings:**

Health: 2 (Moderate)  
Flammability: 2 (Moderate)  
Reactivity: 0 (Minimal)

##### **National Paint and Coatings Hazardous Materials Identification System (“HMIS”) Hazard Ratings:**

Health: 2 (Moderate)  
Flammability: 2 (Moderate)  
Physical Hazard: 0 (Minimal)

##### **HISTORY:**

Date previous SDS: February 13, 2015  
Date of issue: November 13, 2015  
Reasons for Revision: Revised Address and Phone Number

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**16. OTHER INFORMATION INCLUDING INFORMATION ON PREPARATION  
AND REVISION OF THIS MSDS**

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**END OF SAFETY DATA SHEET**