



## TOYOCAT – L20M

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

**PRODUCT IDENTIFIER:** TOYOCAT – L20M  
**MANUFACTURER / IMPORTER:** TOSOH SPECIALTY CHEMICALS USA, Inc.  
**ADDRESS:** 1720 Windward Concourse, Suite 125  
Alpharetta, Georgia 30005  
**PHONE:** 1-770-442-9501  
**EMERGENCY PHONE:** CHEMTREC 1-800-424-9300 OR 1-703-527-3887  
**RECOMMENDED USE:** General industrial products

### 2. HAZARDS IDENTIFICATION

#### GHS CLASSIFICATION

Flammable liquid	Category 3
Acute toxicity	
Oral:	Category 4
Inhalation:	Category 3
Eye damage/eye irritation	Category 1
Skin corrosion/irritation	Category 1B
Specific target organ toxicity – single exposure	Category 3

#### HAZARD SYMBOL:



#### SIGNAL WORD:

**DANGER**

#### HAZARD STATEMENTS:

Flammable liquid and vapor.  
Harmful if swallowed.  
Toxic if inhaled.  
Causes severe skin burns and serious eye damage.  
May cause respiratory irritation.

#### PREVENTION:

Keep away from heat/sparks/open flames/hot surfaces – no smoking.  
Keep container tightly closed.  
Ground/bond container and receiving equipment.  
Use only non-sparking tools.



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

### **PREVENTION:**

Take precautionary measures against static discharge.  
Wear protective gloves/eye protection/face protection.  
Wash thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Do not breathe dust/fume/gas/mist/vapors/spray.  
Use only outdoors or in a well-ventilated area.

### **RESPONSE:**

If in eyes: Rinse cautiously with water for several minutes.  
Remove contact lenses, if present and easy to do.  
Continue rinsing.  
Immediately call a poison control center/doctor.  
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
Wash contaminated clothing before reuse.  
If inhaled: Remove person to fresh air and keep comfortable for breathing.  
Immediately call a poison control center/doctor.  
If swallowed: Rinse mouth. Do NOT induce vomiting.  
In case of fire: Use water spray, fog, dry chemical, foam, CO<sub>2</sub> to extinguish.

### **STORAGE:**

Store in a well-ventilated place. Keep cool.  
Store locked up.

### **DISPOSAL:**

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>
2-Dimethylaminoethanol	108-01-0	Y	80
Triethylenediamine	280-57-9	Y	20

## **4. FIRST AID MEASURES**

### **EYE CONTACT:**

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.



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

**SKIN CONTACT:**

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.

**INGESTION:**

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.

**INHALATION:**

If respiratory irritation or distress occurs, remove victim to fresh air. Seek immediate medical attention.

**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:**

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.



## **6. ACCIDENTAL RELEASE MEASURES (continued)**

**METHOD FOR CLEAN UP:**

Extinguish or remove all sources of ignition. Absorb with an inert absorbent. 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 mists or vapors. Avoid contact with eyes, skin and clothing.

**VENTILATION:**

General area dilution/exhaust ventilation.

**CONDITIONS FOR SAFE STORAGE:**

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**

**ENGINEERING MEASURES:**

Set up hand-wash station and eyewash station near work area.  
General area dilution/exhaust ventilation.

**EXPOSURE LIMITS:**

None

**PERSONAL PROTECTION MEASURES:**

**Respiratory protection:**

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.

**Eye protection:**

Safety glasses with side shields, goggles or face shield are recommended.

**Skin protection:**

Skin contact should be minimized through the use of chemical-resistant gloves and boots, and suitable protective clothing.



## **8. EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)**

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>	Liquid
<b>COLOR:</b>	Yellow
<b>ODOR:</b>	Ammonia-like
<b>pH:</b>	12.2 (@10% aqueous, @68F, 20C)
<b>MELTING POINT:</b>	No data available
<b>BOILING POINT:</b>	271-291F (133-144C)
<b>FLASH POINT:</b>	117F (47C)
<b>AUTOIGNITION POINT:</b>	No data available
<b>EXPLOSIVE LIMITS(Lower):</b>	No data available
<b>EXPLOSIVE LIMITS(Upper):</b>	No data available
<b>VAPOR PRESSURE:</b>	480 Pa @ 68F (20C)
<b>VAPOR DENSITY:</b>	3.21 (Air = 1)
<b>EVAPORATION RATE:</b>	No data available
<b>RELATIVE DENSITY:</b>	0.91
<b>SOLUBILITY IN WATER:</b>	Soluble
<b>PARTITION COEFFICIENT:</b>	No data available
<b>DECOMPOSITION TEMPERATURE:</b>	No data available

## **10. STABILITY AND REACTIVITY**

<b>CHEMICAL STABILITY:</b>	This material is stable under normal handling and storage conditions described in Section 7.
<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. (Data for components).
<b>SKIN CORROSION/IRRITATION:</b>	Corrosive, rabbit (Data for 2-Dimethylaminoethanol).
<b>ACUTE TOXICITY:</b>	
<b>ACUTE ORAL TOXICITY:</b>	LD <sub>50</sub> = 1200 mg/kg, rat. (Data for 2-Dimethylaminoethanol).



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

<b>ACUTE DERMAL TOXICITY:</b>	LD <sub>50</sub> > 2000 mg/kg, rat. Data for Triethylenediamine).
<b>ACUTE INHALATION TOXICITY:</b>	LC <sub>50</sub> = 1641 ppm/4hr, vapor (Data for 2-Dimethylaminoethanol).
<b>SKIN SENSITIZATION</b>	Not a sensitizer (guinea pig. Data for components).
<b>GENETIC TOXICITY</b>	Not mutagenic in the Ames test, Chinese Hamster Ovary, or <i>in vivo</i> mouse micronucleus test (Data for components).
<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.
<b>REPRODUCTIVE TOXICITY:</b>	In a combined repeat-dose/reproductive study (OECD 422) in triethylenediamine, 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. When pregnant rats were exposed to 2-Dimethylaminoethanol vapor at concentrations of 10, 30 or 100 ppm for 6 hours/day, there was no increase in birth defects in offspring.
<b>STOT-SINGLE EXPOSURE:</b>	Expected to cause respiratory irritation. (Data for 2-Dimethylaminoethanol).
<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) (Both data for Triethylenediamine). 72hr EC <sub>50</sub> = 66 mg/L (algae, growth rate) (Data for 2-Dimethylaminoethanol).
<b>PERSISTENCE AND DEGRADABILITY:</b>	Readily biodegradable (Data for 2-Dimethylaminoethanol).
<b>MOBILITY IN SOIL:</b>	No data available



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

**RESIDUAL WASTE:**

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.

**CONTAMINATED VESSELS AND CONTAINERS:**

Rinse containers before disposal. Do not allow rinsate to enter the water systems.  
EPA Hazardous Waste = C (Corrosive) & I (Ignitable)

### **14. TRANSPORTATION INFORMATION**

**PROPER SHIPPING NAME:**

AMINES, LIQUID, CORROSIVE, FLAMMABLE  
N.O.S. (Contains 2-Dimethylaminoethanol)

**UN NUMBER:**

UN2734

**UN CLASS or DIVISION:**

8 (3)

**UN PACKING GROUP:**

II

**LABELS:**

Corrosive, Flammable

**EMERGENCY GUIDE#:**

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### **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: Yes

**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: 3 (Severe)  
Flammability: 2 (Moderate)  
Reactivity: 0 (Minimal)

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

Health: 3 (Severe)  
Flammability: 2 (Moderate)  
Physical Hazard: 0 (Minimal)

**HISTORY:**

Date previous SDS:	September 12, 2013
Date of issue:	April 7, 2015
Reasons for Revision:	GHS Format

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**END OF SAFETY DATA SHEET**