



TOYOCAT - ET

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

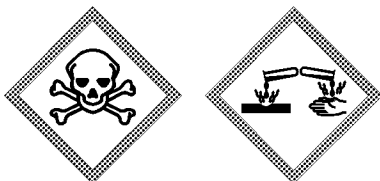
PRODUCT IDENTIFIER: TOYOCAT-ET
MANUFACTURER / IMPORTER: TOSOH SPECIALTY CHEMICALS USA, Inc.
ADDRESS: 1720 Windward Concourse, Suite 125
Alpharetta, Georgia 30005
PHONE: 1-770-442-9501
EMERGENCY PHONE: CHEMTREC 1-800-424-9300 OR 1-703-527-3887
RECOMMENDED USE: General industrial products

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATION

Acute toxicity
Oral: Category 4
Dermal: Category 3
Inhalation: Category 4
Skin corrosion/irritation: Category 1B
Serious eye damage/eye irritation: Category 1
Flammable liquid: Category 4

HAZARD SYMBOL:



SIGNAL WORD:

DANGER

HAZARD STATEMENTS:

Harmful if swallowed.
Toxic in contact with skin.
Harmful if inhaled.
Causes severe skin burns and serious eye damage.
Combustible liquid.



2. HAZARDS IDENTIFICATION (continued)

PREVENTION:

Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves/protective clothing/eye protection/face protection.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use only outdoors or in a well-ventilated area.
Keep away from flames and hot surfaces – No smoking.

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.
Call a poison control center/doctor if you feel unwell.
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.
Call a poison control center/doctor if you feel unwell.
In case of fire: Use water spray, fog, dry chemical, foam, CO₂ 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>
Bis(2-dimethylaminoethyl)ether	3033-62-3	Y	70
Dipropylene glycol	25265-71-8	Y	30



4. FIRST AID MEASURES

EYE CONTACT:	Hold eyelids open and flush with a steady, gentle stream of water for at least 15 minutes. Seek immediate medical attention.
SKIN CONTACT:	Remove contaminated clothing and shoes. Wash with plenty of water, for at least 15 minutes. Seek medical attention if skin 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 ₂
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).
ENVIROMENTAL 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. 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 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.
Bis (2-dimethylaminoethyl) ether	0.05 ppm - ACGIH TWA (skin) – 8-Hr Exposure
Bis (2-dimethylaminoethyl) ether	0.15 ppm - ACGIH STEL (skin) – 15 Min Exposure

PERSONAL PROTECTION MEASURES:

<u>Respiratory protection:</u>	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.
---------------------------------------	--



8. EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

PERSONAL PROTECTION MEASURES:

<u>Eye protection:</u>	Safety glasses with side shields, goggles or face shield are recommended.
<u>Skin protection:</u>	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

PHYSICAL STATE:	Liquid
COLOR:	Pale yellow
ODOR:	Ammonia-like
pH:	No data available
MELTING POINT:	-112F (-80C)
BOILING POINT:	374F (190C)
FLASH POINT:	165F (74C)
AUTOIGNITION POINT:	No data available
EXPLOSIVE LIMITS(Lower):	No data available
EXPLOSIVE LIMITS(Upper):	No data available
VAPOR PRESSURE:	6.89 kPa @ 100F (38C)
VAPOR DENSITY:	No data available
EVAPORATION RATE:	No data available
RELATIVE DENSITY:	0.902
SOLUBILITY IN WATER:	Soluble
PARTITION COEFFICIENT:	No data available
DECOMPOSITION TEMPERATURE:	No data available

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY:	This material is stable under normal handling and storage conditions described in Section 7.
CONDITIONS TO AVOID:	Heat, open flame, sparks, direct sunlight.
INCOMPATIBLE MATERIALS:	Strong oxidizing agents, strong acids, copper, zinc, aluminum and their alloys.
HAZARDOUS DECOMPOSITION PRODUCTS:	Oxides of carbon, oxides of nitrogen, ammonia.
HAZARDOUS POLYMERIZATION:	Not applicable



11. TOXICOLOGICAL INFORMATION

EYE CORROSION/IRRITATION:	Extremely irritating, rabbit. (Data for Bis(2-dimethylaminoethyl)ether)
SKIN CORROSION/IRRITATION:	Corrosive, rabbit. (Data for Bis(2-dimethylaminoethyl)ether)
ACUTE TOXICITY:	
ACUTE ORAL TOXICITY:	LD ₅₀ = 677 mg/kg, rat. (Data for Bis(2-dimethylaminoethyl)ether)
ACUTE DERMAL TOXICITY:	LD ₅₀ = 252 mg/kg, rat. (Data for Bis(2-dimethylaminoethyl)ether)
ACUTE INHALATION TOXICITY:	LC ₅₀ > 2.204 mg/L/4hr, rat (Data for Bis(2-dimethylaminoethyl)ether)
SKIN SENSITIZATION	Not a sensitizer (guinea pig). (Data for Bis(2-dimethylaminoethyl)ether)
GENETIC TOXICITY	Not mutagenic in the Ames test, Chinese Hamster Ovary, or <i>in vivo</i> mouse micronucleus test. (Data for Bis(2-dimethylaminoethyl)ether)
CARCINOGENICITY:	This product does not contain any substances that are considered by OSHA, NTP, IARC or ACGIH to be "probable" or "suspected" human carcinogens.
REPRODUCTIVE TOXICITY:	In a developmental toxicity study in pregnant rabbits, exposure to Bis (2-dimethylaminoethyl) ether resulted in maternal toxicity at 5% and 10% and 5% (the higher doses tested.) Toxicity to the fetus (reduced fetal body weight per litter) was observed only at 10%, a dose which also produced signs of maternal toxicity. There was no evidence for embryotoxicity or teratogenicity at any dose level employed.
STOT-SINGLE EXPOSURE:	Not available
STOT-REPEATED EXPOSURE:	Daily recurrent application of Bis (2-dimethylaminoethyl)ether to intact skin of rabbits, over a period of 90 days at concentrations of 2.0, 0.7, and 0.2% produced local dermal inflammation but no signs of toxicity.



12. ECOLOGICAL INFORMATION

ECOTOXICITY: 96hr LC₅₀ = 131 mg/L (zebra fish)
48hr EC₅₀ > 100 mg/L (daphnia magna)
72hr EC₅₀ = 24 mg/L (algae, growth rate) (All data for Bis (2-dimethylaminoethyl)ether)

PERSISTENCE AND DEGRADABILITY: Not readily biodegradable (Data for Bis (2-dimethylaminoethyl)ether).

MOBILITY IN SOIL: 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)

14. TRANSPORTATION INFORMATION

PROPER SHIPPING NAME: CORROSIVE LIQUID, TOXIC, N.O.S. (contains Bis (2-dimethylaminoethyl) ether)

UN NUMBER: UN2922

UN CLASS or DIVISION: 8(6.1)

UN PACKING GROUP: III

LABELS: Corrosive. Toxic

EMERGENCY GUIDE#: 153

15. REGULATORY INFORMATION

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



15. REGULATORY INFORMATION (continued)

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:	No
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:	May 1, 2008
Date of issue:	April 16, 2015
Reasons for Revision:	GHS Format

Disclaimer: The information set forth herein has been gathered from standard reference materials and/or TOSOH SPECIALTY CHEMICALS USA, INC and its related, subsidiary and affiliated companies' test data and is to the best knowledge and belief of TOSOH SPECIALTY CHEMICALS USA, INC and its related, subsidiary and affiliated companies, accurate and reliable. Such information is offered solely for your consideration, investigation, and verification, and is not suggested or guaranteed that the hazard precautions or procedures mentioned are the only ones that exist. TOSOH SPECIALTY CHEMICALS USA, INC and its related, subsidiary and affiliated companies make no warranties, express or implied, and expressly disclaim any and all such warranties with respect to the use of such information or the use of specific material identified herein in combination with any other material or process, and assume no responsibility therefor. TOSOH SPECIALTY CHEMICALS USA, INC and its related, subsidiary and affiliated companies make no representation or warranty, express or implied, and EXPRESSLY DISCLAIM ANY AND ALL SUCH WARRANTIES, as to the usefulness, sufficiency, MERCHANTABILITY or



**TOSOH SPECIALTY
CHEMICALS USA, INC.**

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

FITNESS FOR ANY PURPOSE whatsoever of the materials identified herein. The purchaser bears sole responsibility for testing, evaluating and determining the suitability of these materials for whatever use(s), manufacturing and refining processes, and any other such application(s) for which it intends or ultimately makes of these materials. Purchaser bears sole responsibility for obtaining any and all regulatory, legal and governmental approval necessary for such use(s).

END OF SAFETY DATA SHEET