Yixing Wencheng Chemical Co., Ltd.

2019/07/15

Safety Data Sheet (SDS)

SECTION 1 、Chemical Product and Company Identification

Product name：ETERMER 321-TF

Other name：1,6-Hexanediol Dimethacrylate

Recommended use of the chemical and restrictions on use：
UV Coatings, Inks, Adhesives, Photoresists

Names, addresses, and phone numbers of the manufacturer or supplier：

Yixing Wencheng Chemical Co., Ltd.
CANGPU village, Yicheng street, Yixing City, Jiangsu Province, China

Emergency contact phone numbers/fax numbers：
David(David@un-wencheng.com)
+86-0510-87501824

SECTION 2 、Hazard Identification

Classification of the substance or mixture：Acute Toxicity (Oral) Category 5

Label elements：

Symbol: ☐ Flame ☐ Exploding bomb ☐ Exclamation mark
☐ Gas cylinder ☐ Health hazard ☐ Flame over circle
☐ Corrosion ☐ Environment ☐ Skull and crossbones

Signal word: Warning
Hazard substance: 1,6-Hexanediol Dimethacrylate
Hazard statement: May be harmful if swallowed.
Precautionary statements: Do not eat, drink or smoke when using this product.

Other hazards：Skin sensitization hazard, heat generation when polymerization, carbon oxide generation when decomposition by heat.

SECTION 3 、Composition/Information on Ingredients

Pure material：

Substance Identity：1,6-Hexanediol Dimethacrylate

Synonyms：EM 321-TF / HDDMA

CAS No：6606-59-3

Approx. Weight Percent (%)：Hazardous Material About 100%

Remark：

SECTION 4 、First Aid Measures

The first-aid measures for different exposure routes：

Inhalation：If overcome by exposure , remove victim to fresh air immediately. Give oxygen or artificial respiration as needed. Obtain emergency medical attention. Prompt action is essential.

Skin contact：Remove contaminated clothing as needed.wash skin thoroughly with mild soap/water.Flush with lukewarm water for 15 minutes.If sticky,use waterless cleaner first.

Eyes contact：In case of eye contact, immediately rinse with clean water for 20-30minutes. Retract eyelids often. Obtain emergency medical attention if pain, blinking.tears or redness persist.

Ingestion：If large quantity swallowed, give lukewarm water (pint) if victim completely conscious / alert. Do not induce vomiting / risk of damage to lungs exceeds poisoning risk. Obtain emergency medical attention.

The most important symptoms and hazardous effects：
Skin sensitization hazard.

The protection of first-aiders：Wear C class protective equipment and first aid in safety area.

Notes to physicians：Skin sensitization hazard. Chemical burn with long-term contact.

SECTION 5 、Fire Fighting Measures

Suitable fire extinguishing media：Foam, carbon dioxide or dry chemical.

Specific hazards may be encountered during fire-fighting：
High temperatures.inhibitor depletion, accidental impurities, or exposure to radiation or oxidizers may cause spontaneous polymerizing reaction generating heat / pressure. Closed containers may rupture or explode during runaway polymerization.

Specific fire-fighting methods：
Full protective equipment, including self contained breathing apparatus is needed to protect fire fighters from exposure.

Special equipment / instructions for the protection of firefighters：
Chemical splash goggles and/or face shield, respiratory protection equipment, protective gloves, apron, boot.

SECTION 6 、Accidental Release Measures

Personal precautions：Wear proper protective equipment, avoid raw material contact and vapor inhalation.

Environmental precautions：1. Extinguish all ignition sources and ventilate area.
2. Dispose/report per regulatory requirements.

Clean-up procedures：1. Avoid contact spilled or released material
2. Reduce spill or release in safety condition.
3. Soak up small spill with inert solids (such as vermiculite, clay) and

sweep/shovel into vented disposal container.
4. Dike and recover large spill. Obtain emergency help by fire or emergency unit.

SECTION 7 、Safe Handling and Storage Measures

Handling procedures：This product is inhibited to prevent uncontrolled polymerization. A polymerization can generate heat and pressure and may cause product container to rupture. Check inhibitor content often and add inhibitor to bulk liquid if needed.

Storage procedures：Maintain head space in storage containers to support oxygen requirements of the inhibitor(s). Do not blanket or mix with oxygen free gas, and prevent material from freezing (inhibitor can separate from product as a solid). Store drums above 10 /50 and below 32 /90 . Bulk storage temperature range:15-27 /59-80 . Store drums away from heat sources, strong oxidizers, radiation and other initiators. Use product within six months of receipt for optimum results. If material freezes, heat and mix to redistribute the inhibitor. Product may also be heated to facilitate handling. Heat product container slowly to 40 /104 for not more than 24 hours. Convection ovens or warm water bath (preferred due to more efficient heat transfer) are recommended for heating. Do not use drum heater. An air space, preferably an air bubble flow, should be provided for at all times during heating.

SECTION 8 、Exposure Controls Measures

Engineering controls：1. Using no spark, grounding ventilation system, and separate from general ventilation system.
2. Exhaust waste gas to outdoor, and take applicable measure to protect environment.
3. Using local exhaust ventilation and closed processing system when mass production.
4. Complement exhaust air by ventilation system with supply plenty fresh air.

Control parameters

Substance name	8 hours time weighted average exposure limits (TWA)	short-term exposure limits (STEL)	maximum exposure limits (CEILING)	biological standards (BEIs)
1,6-Hexanediol Dimethacrylate	—	—	—	—

Personal protective equipment：

Respiratory protection：If this material is handled at elevated temperature or under mist forming conditions, NIOSH/MSHA approved respiratory protection equipment should be used.

Hand protection：Do not use natural rubber gloves.
Products without solvents added: wear nitrile gloves.
Products used with solvents: wear thick (>0.5 mm) nitrile gloves.
Replace gloves immediately when torn or any change in appearance (dimension, color, flexibility, etc) is noticed.

Eye protection：Eye protection such as chemical splash goggles and /or face shield must be worn when possibility exists for eye contact due to splashing or spraying liquid, airborne particles, or vapor. Contact lenses should not be worn.

Skin and body protection：Depending on the conditions of use, protective gloves, apron, boots,

	head and face protection should be worn. This equipment should be cleaned thoroughly after each use.
Hygiene measures：1. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. 2. Use good personal hygiene practices. Wash hands before eating, drinking, smoking, or using toilet facilities. 3. Promptly remove soiled clothing/wash thoroughly before reuse. Shower after work using plenty of soap and water.	

SECTION 9 、Physical and Chemical Properties	
Appearance (physical state, colour, etc)： Liquid at 25	Odor：Mild,musty odor
Odor threshold：—	Melting point/freezing point：—
pH value：6.8 to 7.2	Boiling point/boiling range：107~113
Flammability (solid, gas)：/	Flash point： — ℉ >110 ℃
Decomposition temperature： —	Test method：○ Open cup ● Closed cup
Autoignition temperature：235°C	Explosion limits：—
Vapor pressure：N/DA	Vapor density：>1.0
Density：0.99~1.00 g/cm3 at 25	Solubility：Insoluable in water
Partition coefficient of n-octanol/water： —	Evaporation rate：—

SECTION 10 、Chemical Stability and Reactivity Information
Chemical Stability：Stable on normal condition.
Possible hazardous reactions occurring under specific conditions： Heat and pressure generation when polymerization and the result in closed container broken and cracked.
Conditions to be avoided：High temperatures, localized heat sources (i.e., drum or band heaters), oxidizing conditions, freezing conditions, direct sunlight, ultraviolet radiation, inert gas blanketing.
Materials to avoid：Strong oxidizers, strong reducers, free radical initiators, inert gases, oxygen scavengers
Hazardous decomposition products：Acrid smoke-fumes/carbon monoxide/carbon dioxide and perhaps other toxic vapors may be relessed during a fire involving this product.

SECTION 11 、Toxicological Information
Routes of exposure：Skin, inhalation, ingestion, eyes.
Symptoms：After inhalation：No significant signs or symptoms indicative of any adverse health hazard are expected to occur at standard conditions due to the low volatility of this material. However, aerosols, or vapors which may be generated at elevated processing temperatures, may cause respiratory tract irritation. Symptoms of irritation may include coughing, mucous production and shortness of breath. After skin contact：Although no appropriate human or animal health effects data are known to exist, this material is expected to be a skin irritant. Symptoms may include localized redness or rash and swelling of the affected area. Symptoms may be delayed. A more severe skin response may occur after prolonged contact with this material. Although no appropriate human or animal health effects data is known to exist, this material may cause an allergic skin reaction (sensitization) in susceptible individuals upon repeated exposure. After eye contact： Although no appropriate human or animal health effects data are known to exist, this material is expected to cause eye irritation with symptoms including

burning sensation, tearing, redness or swelling.
After ingestion：Although no appropriate human or animal health effects data are known to exist, this material is expected to be a slight ingestion hazard.

Acute toxicity：—

Chronic toxicity or long term toxicity：—

SECTION 12 、Ecological Information

Ecological toxicity：—

Persistence and degradability：—

Bio-accumulative potential：—

Mobility in soil：—

Other adverse effects：—

SECTION 13 、Waste Disposal Measures

Methods of waste disposal：1. Residues and spilled material may be hazardous waste due to potential for internal heat generator. Disposal must be in accordance with applicable federal, state, or local regulations.
2. The container for this product can present explosion or fire hazards, even when emptied. To avoid risk of injury, do not cut, puncture, or weld on or near this container. Since the emptied containers retain product residue, follow label warnings even after container is emptied.

SECTION 14 、Transport Information

United nations number (UN No)：/

UN Proper shipping name：/

Transport hazard class(es)：/

Packing group number：—

Marine pollutant（YES／NO）：○ YES ● NO

Specific transport measures and precautionary conditions：

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SECTION 15 、Regulatory Information

Applicable regulations：TSCA status: All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

International Inventory Status

Australia (AICS)	Included on inventory
Canada (CEPA)	Included on DSL inventory
Japan (ENCS)	Included on inventory
China(IECSC)	Included on inventory
Europe(EC)	Included on EINECS inventory
Korea(ECL)	Included on inventory
New Zealand(NZIoC)	Included on inventory

Note : qualifiers and codes used in this MSDS
N/A = Not Applicable; N/DA = No Data Available; AP = Approximately

SECTION 16 、Other Information

Reference documents

SDS prepared by

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Date：2019/07/15
Remark：“ – “ = not available ; “ / “ = not applicable

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