

MATERIAL SAFETY DATA SHEET



Page:1
DATE PREPARED: 7/26/2005
MSDS No: 131100
Tallow Amine

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: Tallow Amine
Product Description: Clear liquid with ammoniacal odor
Chemical Family: Ether amine

MANUFACTURER:
TOMAH Products
1012 Terra Drive
P. O. Box 388
Milton, WI 53563
Customer Service: (608) 868-6811

24 HR. EMERGENCY TELEPHONE NUMBERS:
CHEMTREC (800) 424-9300
Emergency Phone (608) 868-6811

2. COMPOSITION/INFORMATION ON INGREDIENTS

Component	wt%	CAS Registry #
Amines, tallow alkyl	97%	61790-33-8

OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200)

EXPOSURE LIMITS

Component	OSHA PEL	ACGIH TLV	Supplier
Amines, tallow alkyl	None Established	None Established	

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

IMMEDIATE CONCERNS:

- Danger!
- Causes eye burns
- Causes skin burns
- Harmful by ingestion
- May cause respiratory tract irritation

MATERIAL SAFETY DATA SHEET



Page:2
DATE PREPARED: 7/26/2005
MSDS No: 131100
Tallow Amine

POTENTIAL HEALTH EFFECTS

EYES:

Corrosive. Will cause eye burns and permanent tissue damage;

SKIN:

Corrosive; causes permanent skin damage

INGESTION:

Corrosive to mouth, esophagus and stomach. Moderate toxicity if ingested.

INHALATION:

Irritating to eyes and respiratory tract in high concentrations.

4. FIRST AID MEASURES

EYES:

Immediately flush eyes with large amounts of water for at least 15 minutes while holding eyelids open. Get prompt medical attention.

SKIN:

Immediately use soap and water to wash the affected area for at least 15 minutes. If dilute (3%) Acetic Acid solution is immediately available, use it to wash the affected area. If the skin remains greasy when touched, repeat the 3% Acetic Acid treatment followed by another soap and water washing. Avoid contact of the acid solution with eyes, genitals or open sores. Remove contaminated clothing and clean thoroughly before reuse.

Get prompt medical attention.

INGESTION:

DO NOT induce vomiting. If individual is conscious, give milk or water to dilute stomach contents. Keep warm and quiet. Get prompt medical attention. DO NOT attempt to give anything by mouth to an unconscious person.

INHALATION:

Using proper respiratory protection, immediately remove the affected victim from exposure. Administer artificial respiration if breathing is stopped. Keep at rest. Call for prompt medical attention.

5. FIRE FIGHTING MEASURES

Flashpoint and Method: >150°F Penskey-Marten CC

HAZARDOUS COMBUSTION PRODUCTS:

Carbon Monoxide, Carbon Dioxide oxides of Nitrogen and ammonia may be produced.

FIRE FIGHTING PROCEDURES:

Use water spray to cool fire exposed surfaces and to protect personnel. Isolate "fuel" supply from fire.

Use alcohol type foam, universal foam, dry chemical or water spray to extinguish fire.

FLAMMABLE LIMIT:

Not available

FIRE EXPLOSION:

Low Hazard, liquid can burn upon heating to temperatures at or above the flashpoint.

MATERIAL SAFETY DATA SHEET



Page:3
DATE PREPARED: 7/26/2005
MSDS No: 131100
Tallow Amine

"Empty" containers retain product residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Empty drums should be completely drained, properly bunged and promptly re- turned to a drum reconditioner, or properly disposed of.

SENSITIVE TO STATIC DISCHARGE:
No, but use proper grounding procedure

6. ACCIDENTAL RELEASE MEASURES

ENVIRONMENTAL PRECAUTIONS:

WATER SPILL:

Remove from surface by skimming or with suitable adsorbents. If allowed by local authorities and environmental agencies, sinking and/or suitable dispersants may be used in non-confined waters.

Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.

LAND SPILL:

Eliminate sources of ignition. Prevent additional discharge of material, if possible to do so without hazard. For small spills implement cleanup procedures; for large spills implement cleanup procedures and, if in public area, keep public away and advise authorities. Also, if this product is subject to CERCLA reporting (see Section15) notify the National Response Center.

Prevent liquid from entering sewers, watercourses, or low areas. Contain spilled liquid with sand or earth. Recover by pumping or with a suitable absorbent.

Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.

7. HANDLING AND STORAGE

GENERAL PROCEDURES:

Keep container closed. Handle and open containers with care. Store in a cool, well ventilated place away from incompatible materials.

Do NOT handle or store near an open flame, heat or other sources of ignition. Protect material from direct sunlight.

It is not known if this material is a static accumulator. Therefore, use proper grounding procedures.

Do NOT pressurize, cut, heat, or weld containers. Empty product containers may contain product residue. Do NOT reuse empty containers without commercial cleaning or reconditioning.

Storage Temperature: 60.0°F minimum to 160.0°F maximum

Loading Temperature: 12°F minimum to 180°F maximum

Loading/Unloading Viscosity: 3 to 10 cst

STORAGE PRESSURE:

Atmospheric

MATERIAL SAFETY DATA SHEET



Page:4
DATE PREPARED: 7/26/2005
MSDS No: 131100
Tallow Amine

ELECTROSTATIC ACCUMULATION HAZARD:
Unknown, use proper grounding procedure

STORAGE

MATERIALS AND COATINGS SUITABLE:

Stainless Steel

Carbon Steel

MATERIALS AND COATINGS UNSUITABLE

Polypropylene

Polyethylene

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS:

Ventilation should be provided to control worker exposures and prevent health risk.

PERSONAL PROTECTION:

WORK HYGIENIC PRACTICES:

For open systems where contact is likely, wear long sleeves, chemical resistant gloves, and chemical goggles.

Where contact may occur, wear long sleeves and safety glasses with side shields.

Where overexposure by inhalation may occur and engineering, work practice or other means of exposure reduction are not adequate, approved respirators may be necessary.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Solid.

Odor: Ammoniacal.

Color: Yellow

Melting/Freezing Point: 40°C (104°F)

Vapor Pressure: <0.1 kPa (<1 mmHg) (at 20°C)

Solubility: Very slightly soluble in cold water.

Pour Point 35oC

Viscosity = 44.4SSU @ 45oC; 40.6SSU @ 55oC; 38.8SSU @ 65oC; 37.8SSU @ 75oC.

Density: 0.814 g/cm @ 38°C / 100.4°F

10. STABILITY AND REACTIVITY

STABLE: Yes

HAZARDOUS POLYMERIZATION: No

STABILITY:

Not applicable

MATERIAL SAFETY DATA SHEET



Page:5
DATE PREPARED: 7/26/2005
MSDS No: 131100
Tallow Amine

POLYMERIZATION:
Not applicable

CONDITIONS TO AVOID:
Avoid contact with strong acids and strong oxidizing agents.

HAZARDOUS DECOMPOSITION:
ammonia, propylamine, and volatile hydrocarbons

INCOMPATIBLE MATERIALS
Polyethylene and natural rubber

11. TOXICOLOGICAL INFORMATION

ORAL TOXICITY
Oral LD50 (rat) = 1950 mg/kg

MUTAGENIC EFFECTS: Non-mutagenic for bacteria and/or yeast.

CHRONIC EFFECTS ON HUMANS:
Amines, tallow alkyl: Chromosomal (DNA) abnormalities will not occur in CHO mammalian cell assay, the In Vivo Cytogenetics Assay in mice, the CHO/HGPRT mammalian cell assay and the Mouse Lymphoma Assay; based on a similar material.

SKIN EFFECTS:
Corrosive to the skin.

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION:
This product is expected to have aquatic toxicity less than 1 ppm based on testing of similar products.

ENVIRONMENTAL FATE:
This product is expected to be inherently biodegradable based on the following test data:
55% @ 28 day(s) CBT. 72% @ 42 days

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD:
Dispose of in accordance with federal, state and local regulations.
If disposed of this product would not be considered a hazardous waste.

MATERIAL SAFETY DATA SHEET



Page:6
DATE PREPARED: 7/26/2005
MSDS No: 131100
Tallow Amine

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)
Proper Shipping Name: AMINES, LIQUID CORROSIVE, N.O.S.
Technical Name: Fatty Amine
Hot Hazard: No
Combustible Class: No
Hazard Class: 8
NA/UN Number: UN 2735
Packing Group: III

INTERNATIONAL (I.M.O.)
Proper Shipping Name: Amines, liquid, corrosive, n.o.s.
Marine Pollutant: No
ADR/RID Hazard Classification: 8

AIR (I.C.A.O.)
Proper Shipping Name: Amines, liquid, corrosive, n.o.s.

15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

311/312 Hazard Categories: Under the provisions of Title III, Sections 311/312 of the Superfund Amendments and Reauthorization Act (SARA) this product is classified into the hazards listed below:

Fire: No Pressure Generating: No Reactivity: No Acute: Yes Chronic: No

313 Reportable Ingredients: This product does not contain any ingredients reportable under Section 313.

CERCLA (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)

If this product is accidentally spilled, it is not subject to any special reporting under the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). We recommend you contact local authorities to determine if there may be other local reporting requirements.

TSCA (TOXIC SUBSTANCE CONTROL ACT)

TSCA Status: Components of this product are listed on the TSCA Inventory

WHIMIS: Class E Corrosive

MATERIAL SAFETY DATA SHEET



Page:7
DATE PREPARED: 7/26/2005
MSDS No: 131100
Tallow Amine

EC Symbols	C Corrosive N Dangerous for the environment. R34 Causes burns
EC Risk Phrases	R22 Harmful if swallowed R50/53 Very toxic to aquatic organisms. May cause long term adverse effects in the aquatic environment
EC Safety Phrases	S24/25 Avoid contact with skin and eyes S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S27/28 After contact with skin, take off immediately all contaminated clothing and wash immediately with plenty of soap and water S36/37/39 Wear suitable protective clothing, gloves and eye/face protection. S61 Avoid release to the environment. Refer to special instructions/Safety data sheets.

This product is listed on the following international inventories:

- US TSCA
- Canadian DSL
- European EINECS
- Australian
- Japan
- Korean
- Philippine

STATE REGULATIONS

PROPOSITION 65 STATEMENT:

This product contains the following levels of compounds found by the State of California to cause cancer.

Nickel <10 ppm

GENERAL COMMENTS:

PROTECTION OF STRATOSPHERIC OZONE (PURSANT TO SECTION 622 OF THE CLEAN AIR ACT AMMENDMENTS OF 1990):

Per 40 CFR Part 82, this product does not contain nor was it directly manufactured with any Class I or Class II ozone depleting substances.

16. OTHER INFORMATION

Approval date: 7.26.2005

MATERIAL SAFETY DATA SHEET



Page:8
DATE PREPARED: 7/26/2005
MSDS No: 131100
Tallow Amine

NFPA CODES

Fire: 1 Health 3 Reactivity: 0

HMIS CODES

Fire: 1 Health: 3 Reactivity: 0

MANUFACTURER DISCLAIMER:

This information relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is to the best of our knowledge and belief, accurate and reliable as of the date compiled. However, no representation, warranty or guarantee is made as to its accuracy, reliability or completeness. It is the users responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use. We do not accept liability for any loss or damage that may occur from the use of this information nor do we offer warranty against patent infringement.
