Material Safety Data Sheet

DIMLA TM 1214

Revision Date *27-Jul-2011*

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

Product Name	**DIMLA TM 1214**
Use of the Substance/Preparation	Chemical intermediate
Company/Undertaking Identification	**Taminco Inc.** Two Windsor Plaza, Suite 411 7540 Windsor Drive Allentown, PA 18195 (800) 223-3258
Emergency telephone number	In case of emergency call CHEMTREC 1-800-424-9300 703-527-3887 (International Calls)

2. HAZARDS IDENTIFICATION

Appearance

Colorless to light yellow liquid; Ammoniacal, amine-like odor

Emergency Overview

- DANGER!
- Corrosive
- Causes skin and eye burns
- May cause irreversible eye damage
- Vapors may be irritating to eyes, nose, throat, and lungs
- Vapors may have a strong offensive odor which may cause headaches, nausea, and vomiting
- Harmful if swallowed
- The substance is identified as a hazardous chemical according to the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Principal Routes of Exposure

- Inhalation
- Skin contact
- Eye contact

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %
Dimethyldodecylamine	112-18-5	62-75
Dimethyltetradecylamine	112-75-4	21-30

4. FIRST AID MEASURES

Ingestion

- Do not induce vomiting
- Never give anything by mouth to an unconscious person
- If victim is conscious
- Rinse mouth
- drink 1 or 2 glasses of water
- Immediate medical attention is required

Skin Contact

- Immediately flush skin with running water for 30 minutes or until no traces remain. Wash with soap and water. Remove contaminated clothing immediately.
- Immediate medical attention is required
- Wash contaminated clothing before re-use

Eye Contact

- Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 30 minutes.
- Immediate medical attention is required

Inhalation

- Move to fresh air
- If breathing is difficult, give oxygen
- Do not give mouth-to-mouth
- If not breathing, give artificial respiration
- Seek immediate medical attention/advice

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

- Alcohol-resistant foam
- carbon dioxide (CO2)
- dry chemical
- water spray

Specific methods

- Evacuate personnel to safe areas
- Keep people away from and upwind of spill/leak
- Do not allow run-off from fire fighting to enter drains or water courses
- Suppress (knock down) gases/vapors/mists with a water spray jet
- Cool containers / tanks with water spray
- Vapors are heavier than air and may spread along floors
- In case of fire, stop leak if safe to do so

Special protective equipment for fire-fighters

- Firefighters and others who may be exposed to products of combustion should wear full fire fighting turn out gear (full Bunker Gear) and self-contained breathing apparatus (pressure demand NIOSH approved or equivalent)
- Wash/Decontaminate removed clothing before reuse

Specific hazards

- Avoid breathing vapors or mists
- Heating or fire can release toxic gas
- Carbon oxides
- Nitrogen oxides (NOx)

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions

- Avoid contact with skin, eyes and clothing
- Eliminate all ignition sources if safe to do so
- Ventilate the area
- Evacuate personnel to safe areas
- Keep people away from and upwind of spill/leak
- Do not breathe vapors or spray mist

Environmental Precautions

- Should not be released into the environment
- Do not allow run-off from fire fighting to enter drains or water courses
- Local authorities should be advised if significant spillages cannot be contained

Methods for Clean-up

- Prevent product from entering drains
- Large spills should be collected mechanically (remove by pumping) for disposal
- Take precautionary measures against static discharges
- Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container

7. HANDLING AND STORAGE

Storage

Technical measures/Precautions

- In accordance with local and national regulations
- Keep away from open flames, hot surfaces and sources of ignition
- Keep containers tightly closed in a dry, cool and well-ventilated place
- Protect containers from physical damage

Incompatible products

- Materials to avoid
- Strong acids and oxidizing agents

Handling

Technical measures/Precautions

- In accordance with local and national regulations
- Use only in area provided with appropriate exhaust ventilation
- Ensure that eyewash stations and safety showers are close to the workstation location

Safe handling advice

- Do not breathe vapors or spray mist
- Ensure adequate ventilation
- In case of insufficient ventilation, wear suitable respiratory equipment
- Avoid contact with skin, eyes and clothing
- Wear personal protective equipment
- Keep container tightly closed
- Empty containers retain product residue and may be hazardous
- Wash thoroughly after handling

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Chemical Name	ACGIH TLV	OSHA PEL
Dimethyldodecylamine	Not listed	None Established
Dimethyltetradecylamine	Not listed	None Established

Respiratory Protection

- Do not use in areas without adequate ventilation
- Avoid breathing vapors or mists
- In case of insufficient ventilation, wear suitable respiratory equipment
- The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace
- In accordance with local and national regulations
- wear respiratory protection
- a respirator with filter for organic vapor
- In case of higher concentration
- wear a positive-pressure supplied-air respirator with full facepiece
- self-contained breathing apparatus

Engineering measures

- Local exhaust

Personal Protective Equipment

Eye Protection

- Face-shield
- and
- Chemical resistant goggles must be worn
- Ensure that eyewash stations and safety showers are close to the workstation location

Hand protection

- Impervious gloves
- Solvent-resistant gloves
- The exact break through time can be obtained from the protective glove producer and this has to be observed

Skin Protection

- Solvent-resistant apron and boots
- Wear protective gloves/clothing
- Impervious clothing
- Choose body protection according to the amount and concentration of the dangerous substance at the work place
- Wash hands and face before breaks and immediately after handling the product

Environmental exposure controls

- Prevent product from entering drains
- Do not contaminate surface water
- Avoid subsoil penetration

9. PHYSICAL AND CHEMICAL PROPERTIES

General Information

Physical State	Liquid
Color	Clear
Odor	Ammoniacal

Important Health Safety and Environmental Information

Boiling Point/Range	204°C 399°F
Flash Point	> 100°C > 212°F
Viscosity	Not applicable
Vapor Pressure	< 1 hPa @ 20 °C
Partition Coefficient (n-octanol/water)	log Pow >3
pH	No information available

Water solubility	The product is insoluble and floats on water miscible with most organic solvents
Oxidizing Properties	Not applicable
Explosion Limits	No information available
Melting Point/Range	-18°C
Density	0.790 g/cm3 @ 25 °C
Flammability	Not flammable
Autoignition Temperature	No data available

10. STABILITY AND REACTIVITY

Stability

- Stable under normal conditions

Conditions to Avoid

- Keep away from open flames, hot surfaces and sources of ignition
- Materials to avoid
- Strong acids and oxidizing agents
- copper
- copper alloys
- Do not use sodium nitrite or other nitro sating agents in product
- nitrosamine

Hazardous Decomposition Products

- None under normal use
- Heating or fire can release toxic gas
- Carbon oxides
- nitrogen oxides (NOx)
- aldehydes
- ketones

Hazardous Polymerization Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Eye Contact Corrosive to eyes. Contact may cause eye burns. May cause blindness. Vapors may cause severe irritation and conjunctivitis with possible cornea edema.

Skin Contact Causes skin burns, Swelling and redness of the skin.

Inhalation May cause delayed lung injury. Vapors may have a strong offensive odor which may cause headaches, nausea, and vomiting. Inhalation of dusts or mists may cause severe eye, mucous membrane, and respiratory irritation.

Ingestion Ingestion may cause burns of the gastrointestinal tract, nausea, vomiting, and diarrhea. Harmful if swallowed.

Chronic Effects Chronic exposure may cause dermatitis.

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	IARC	ACGIH	OSHA	NTP
Dimethyldodecylamine	Not Listed	Not Listed	Not Listed	Not Listed
Dimethyltetradecylamine	Not Listed	Not Listed	Not Listed	Not Listed

Aggravated Medical Conditions Skin disorders. Eye disease.

Product Information

LD50/oral/rat =	1220 mg/kg
LD50/dermal/rabbit =	~ 5000 mg/kg

Eye irritation	Corrosive
Skin irritation	Corrosive
Sensitization	Not required: Corrosive Material:
Mutagenic Effects	Did not show mutagenic effects in animal experiments
Reproductive toxicity	Did not show teratogenic effects in animal experiments

12. ECOLOGICAL INFORMATION

Ecotoxicity

Component Information	Dodecanamine, N-dimethyl
LC50/96h/Brachydanio rerio	0.71 - 1.0 mg/l
EC50/48h/daphnia =	0.83 mg/l
EC50/72h/algae =	0.014 mg/l
Toxicity to bacteria	EC50 (3h) : 80 mg/l

Mobility

No information available

Persistence and Degradability

Readily biodegradable, according to appropriate OECD test

Bioaccumulative Potential

No data available

13. DISPOSAL CONSIDERATIONS

Waste disposal methods	Dispose of in accordance with local regulations
Contaminated Packaging	In accordance with local and national regulations. Empty containers retain product residue and may be hazardous. Empty containers should be taken for local recycling, recovery or waste disposal.

14. TRANSPORT INFORMATION

DOT

Shipping Description	UN2735, Amines, liquid, corrosive, n.o.s. (Dimethyldodecylamine, Dimethyltetradecylamine), 8, PG II
Hazard Class	8
UN-No	UN2735
Packing Group	II

Reportable Quantity (RQ)	None
Marine Pollutant	Yes.
Labelling	Corrosive

IMDG/IMO

Shipping Description	UN2735, Amines, liquid, corrosive, n.o.s. (Dimethyldodecylamine, Dimethyltetradecylamine), 8, PG II
Hazard Class	8
UN-No	UN2735
Packing Group	II
Marine Pollutant	Yes
Labelling	Corrosive

IATA

Shipping Description	UN2735, Amines, liquid, corrosive, n.o.s. (Dimethyldodecylamine, Dimethyltetradecylamine), 8, PG II
Hazard Class	8
Packing Group	II
Labelling	Corrosive

15. REGULATORY INFORMATION

International Inventories

All of the components in the product are on the following Inventory lists: U.S.A. (TSCA), Europe (EINECS/ELINCS/NLP), Canada (DSL/NDSL), Japan (ENCS), Australia (AICS), Philippines (PICCS), China (IECSC), Korea (KECL), New Zealand (NZIoC).

NOTE: X = Listed

Chemical Name	TSCA	EINECS	DSL	ENCS	MITI	AICS	PICCS	IECSC	KECL	NZIoC
Dimethyldodecylamine	X	2039438	X	(2)-176		X	X	X	KE-11504	X
Dimethyltetradecylamine	X	2040024	X	(2)-176		X	X	X	KE-11864	X

OSHA HAZARD CLASSIFICATION: This material is classified as hazardous under Federal OSHA regulation: Corrosive, Toxic

SARA 311/312 Hazardous Categorization
Acute Health Hazard

SARA TITLE III SECTION 313 INFORMATION:
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

NOTE: X = Listed

CERCLA Hazardous Substances
This product does not contain any RQs or TPQs under this regulation.

State Right-to-Know

NOTE: X = Listed

Chemical Name	PA	NJ	MA
Dimethyldodecylamine 112-18-5	Not Listed	Not Listed	Not Listed
Dimethyltetradecylamine 112-75-4	Not Listed	Not Listed	Not Listed

California Proposition 65 No information available

WHMIS Hazard Class D1B Toxic materials
E Corrosive material

Canadian Environmental Protection Act This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR

16. OTHER INFORMATION

HMIS	**Health** 3	**Flammability** 1	**Physical Hazard** 0
NFPA	**Health** 3	**Fire** 1	**Instability** 0

Legend: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe

Literary Reference -Taminco Proprietary Studies

Disclaimer: The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Safety Data Sheet