

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name	AT-121416A
Version #	02
Revision date	05-13-2011
CAS #	Mixture
MSDS Number	AMINE302
Product use	Intermediate in the manufacture of cationic surfactants, quaternaries for biocides, flotation agents, gasoline detergents, corrosion inhibitors, rubber processing additives, emulsifiers for herbicides, textile softeners, and oilfield drilling materials.
Synonym(s)	Mixture of C12-C16 dimethylamine, Fatty Tertiary Amine
Manufacturer	The Procter & Gamble Company Procter & Gamble Chemicals Sharon Woods Innovation Center 11530 Reed Hartman Highway Cincinnati, Ohio 45241 1-800-477-8899 or 1-513-626-6882 PGChemMSDS.IM@pg.com CHEMTREC: 1-800-424-9300 U.S. and Canada CHEMTREC: 1-703-527-3887 For calls originating elsewhere

2. Hazards Identification

Emergency overview	DANGER Corrosive. Causes skin and eye burns. Harmful if inhaled. Harmful if swallowed. Harmful if absorbed through skin. Irritating to respiratory system.
OSHA regulatory status	This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).
Potential health effects	
Routes of exposure	Inhalation. Ingestion. Skin contact. Eye contact.
Eyes	Causes eye burns. Harmful in contact with eyes. Risk of serious damage to eyes. Do not get this material in contact with eyes.
Skin	Causes skin burns. Harmful in contact with skin. Do not get this material in contact with skin.
Inhalation	Causes burns. Harmful if inhaled. Irritating to respiratory system. Do not breathe dust/fume/gas/mist/vapors/spray.
Ingestion	Harmful if swallowed. Ingestion may produce burns to the lips, oral cavity, upper airway, esophagus and possibly the digestive tract. Do not ingest.
Specific hazards	Causes burns. Harmful by inhalation, in contact with skin and if swallowed.
Potential environmental effects	May cause long-term adverse effects in the environment.

3. Composition / Information on Ingredients

Components	CAS #	Percent
1-TETRADECANAMINE, N,N-DIMETHYL-	112-75-4	49
1-DODECANAMINE, N,N-DIMETHYL-	112-18-5	41.5
1-HEXADECANAMINE, N,N-DIMETHYL-	112-69-6	9.7

Additional components	CAS #	Percent
1-DECANAMINE, N,N-DIMETHYL-	1120-24-7	<= 1

4. First Aid Measures

First aid procedures

Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
Skin contact	Remove and isolate contaminated clothing and shoes. Immediately flush skin with plenty of water. Get medical attention immediately. For minor skin contact, avoid spreading material on unaffected skin. Wash clothing separately before reuse.
Inhalation	Move to fresh air. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a physician or poison control center immediately.
Ingestion	Rinse mouth thoroughly. Do not induce vomiting without advice from poison control center. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

Notes to physician

In case of shortness of breath, give oxygen. Keep victim warm.

General advice

Immediate medical attention is required. In case of shortness of breath, give oxygen. Keep victim warm. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire Fighting Measures

Flammable properties

Not flammable by OSHA criteria. Not combustible by OSHA criteria.

Extinguishing media

Suitable extinguishing media Water. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO₂).

Protection of firefighters

Protective equipment and precautions for firefighters Wear suitable protective equipment.

Special protective equipment for fire-fighters

Wear suitable protective equipment.

Fire fighting equipment/instructions

Move containers from fire area if you can do so without risk. In the event of fire, cool tanks with water spray. Use water spray to cool unopened containers. Cool containers exposed to flames with water until well after the fire is out.

Specific methods

In the event of fire, cool tanks with water spray. Use water spray to cool unopened containers.

6. Accidental Release Measures

Personal precautions

Keep unnecessary personnel away. Keep upwind. Keep out of low areas. Keep people away from and upwind of spill/leak. Fully encapsulating, vapor protective clothing should be worn for spills and leaks with no fire. Ventilate closed spaces before entering them. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not contaminate water.

Methods for containment

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways.

Methods for cleaning up

Should not be released into the environment.

Large Spills: Dike far ahead of spill for later disposal. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Following product recovery, flush area with water.

Never return spills in original containers for re-use.

7. Handling and Storage

Handling

DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Do not get this material in contact with eyes. Do not get this material in contact with skin. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not get this material on clothing. Wear personal protective equipment. Do not use in areas without adequate ventilation. Wash thoroughly after handling. Avoid release to the environment.

Storage

Keep away from heat, sparks and open flame. Store in a well-ventilated place. Keep container tightly closed. Do not store near combustible materials. Keep out of the reach of children. Use care in handling/storage. Store in tightly closed original container in a dry, cool and well-ventilated place. Keep from contact with oxidizing materials, highly oxygenated or halogenated solvents, organic compounds containing reducible functional groups, or aqueous ammonia. Unsuitable containers: copper, zinc, aluminum, copper alloy, zinc alloy, aluminum alloy.

Specific uses

Detergent intermediate: follow bulk handling and storage procedures as noted above.

8. Exposure Controls / Personal Protection

Engineering controls

Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

General

Structural firefighters protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations.

Eye / face protection

Do not get in eyes. Chemical goggles are recommended. Face-shield.

Skin protection

Do not get this material in contact with skin. Do not get this material on clothing. Wear chemical protective equipment that is specifically recommended by the manufacturer. It may provide little or no thermal protection. Structural firefighters protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations. Use chemical splash goggles and face shield (ANSI Z87.1 or approved equivalent). Chemical resistant gloves.

Respiratory protection

Do not breathe dust/fume/gas/mist/vapors/spray. Wear positive pressure self-contained breathing apparatus (SCBA).

General hygiene considerations

Do not get in eyes. Do not get this material in contact with skin. Do not get this material on clothing. When using, do not eat, drink or smoke. Keep away from food and drink. Handle in accordance with good industrial hygiene and safety practice.

9. Physical & Chemical Properties

Appearance

Liquid.

Physical state

Liquid.

Form

Not available.

Color

Colorless to yellow, clear to slightly cloudy.

Odor

Fishy

Odor threshold

Not available.

pH

Not available.

Vapor pressure

<= 1 mm Hg at 100F (38C)

Vapor density

Not available.

Boiling point

399.2 °F (204 °C) @ 760 mm Hg (101.3kPa)

Melting point/Freezing point

Not available.

Solubility (water)

Very slight

Specific gravity	0.8 at 21/21 C
Relative density	Not available.
Flash point	199.4 °F (93.3 °C) Pensky-Martens Closed Cup
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Auto-ignition temperature	Not available.

10. Chemical Stability & Reactivity Information

Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Heat, flames and sparks.
Materials to avoid	Copper and copper alloys. Strong oxidizing agents. Strong acids.
Hazardous decomposition products	Upon decomposition, this product may yield gaseous nitrogen oxides, carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.
Hazardous polymerization	Hazardous polymerization does not occur.

11. Toxicological Information

Toxicological data

Product	Test Results
AT-121416A (Mixture)	Acute Oral LD50 Mouse: 30.9278 g/kg estimated Acute Oral LD50 Rat: 1783.13 mg/kg estimated Acute Oral LD50 Rat: 1.1 g/kg Based on P&G safety information for C14 - C18 alkyl dimethylamines Acute Oral LD50 Rat: 1 g/kg Based on P&G safety information for C10 - C16 alkyl dimethylamines Acute Other LD50 Mouse: 30.9278 g/kg estimated

Components

Components	Test Results
1-DODECANAMINE, N,N-DIMETHYL- (112-18-5)	Acute Oral LD50 Rat: 740 mg/kg
1-HEXADECANAMINE, N,N-DIMETHYL- (112-69-6)	Acute Oral LD50 Mouse: >= 3 g/kg Acute Other LD50 Mouse: >= 3 g/kg Subcutaneous

Sensitization	Not available.
Acute effects	Causes burns.
Local effects	Irritating to respiratory system.
Chronic effects	Not available.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
Skin corrosion/irritation	Hazardous by OSHA criteria.
Epidemiology	Not available.
Mutagenicity	Not available.
Neurological effects	Not available.
Reproductive effects	Not available.
Teratogenicity	Not available.

12. Ecological Information

Ecotoxicological data

Product	Test Results
AT-121416A (Mixture)	LC50 Bluegill (Lepomis macrochirus): 2.1 mg/l 96.00 hours Data for 1-Octadecanamine, N,N-dimethyl (CAS # 124-28-7); expected to be similar

Product**Test Results**

LC50 Fish: 1.7108 mg/l 96.00 hours estimated
LC50 Water flea (Daphnia magna): 0.35 mg/l 48.00 hours Data for 1-Octadecanamine, N,N-dimethyl (CAS # 124-28-7); expected to be similar

Components**Test Results**

1-DODECANAMINE, N,N-DIMETHYL- (112-18-5)

LC50 Fish: 0.71 - 1 mg/l 96.00 hours
LC50 Water flea (Daphnia magna): 0.083 mg/l 48.00 hours

* Estimates for product may be based on additional component data not shown.

Ecotoxicity Toxic to aquatic organisms. Contains a substance which causes risk of hazardous effects to the environment.

Environmental effects An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Persistence / degradability Inherently degradable based on OECD 301B.

13. Disposal Considerations

Waste codes D002: Waste Corrosive material [pH \leq 2 or \geq 12.5, or corrosive to steel]

Disposal instructions Dispose of this material and its container to hazardous or special waste collection point. Incinerate the material under controlled conditions in an approved incinerator. Do not allow this material to drain into sewers/water supplies. Dispose in accordance with all applicable regulations.

14. Transport Information**DOT****Basic shipping requirements:**

Proper shipping name Amines, liquid, corrosive, n.o.s. (Alkyl (C12-C14) dimethylamine)

Hazard class 8

UN number UN2735

Packing group III

Marine pollutant Alkyl (C12-C14) dimethylamine

Additional information:

Special provisions IB3, T7, TP1, TP28

Packaging exceptions 154

Packaging non bulk 203

Packaging bulk 241

ERG number 153



DOT

General

IMDG Regulated Marine Pollutant.

15. Regulatory Information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
CERCLA/SARA Hazardous Substances - Not applicable.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2))

Not regulated

DEA Essential Chemical Code Number

Not regulated

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Not regulated

DEA Exempt Chemical Mixtures Code Number

Not regulated

CERCLA (Superfund) reportable quantity

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance No

Section 311 hazardous chemical No

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Switzerland	Switzerland FOPH	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

State regulations This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

US - New Jersey Community RTK (EHS Survey): Reportable threshold

US - Pennsylvania RTK - Hazardous Substances: Listed substance

Contains no Pennsylvania Right To Know hazardous substances

16. Other Information

Further information HMIS® is a registered trade and service mark of the NPCA.

HMIS® ratings

Health: 3
Flammability: 2
Physical hazard: 0

NFPA ratings

Health: 3
Flammability: 2
Instability: 0

Disclaimer

The submission of the MSDS may be required by law, but this is not an assertion that the substance is hazardous when used in accordance with proper safety practices and normal handling procedures. Data supplied are for use only in connection with occupational safety and health.

The information contained herein has been compiled from sources considered by Procter & Gamble to be dependable and is accurate to the best of the Company's knowledge. The information relates to the specific product designated herein, and does not relate to use in combination with any other material of any other process. Procter & Gamble assumes no responsibility for injury to the recipient or third persons, or for any damage to any property resulting from misuse of the controlled product.

Issue date

05-13-2011

This data sheet contains changes from the previous version in section(s):

Product and Company Identification: Product and Company Identification
Hazards Identification: Specific hazards
Physical & Chemical Properties: Multiple Properties
Other Information: Disclaimer