

## MATERIAL SAFETY DATA SHEET

### 1. Product and Company Identification

<b>Material name</b>	<b>AT-1295A</b>
<b>Version #</b>	02
<b>Revision date</b>	02-15-2011
<b>CAS #</b>	112-18-5
<b>MSDS Number</b>	AMINE342
<b>Product use</b>	Intermediate raw material for downstream derivitization.
<b>Synonym(s)</b>	1-Dodecanamine, N,N-dimethyl-
<b>Manufacturer</b>	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

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

### 3. Composition / Information on Ingredients

Components	CAS #	Percent
1-DODECANAMINE, N,N-DIMETHYL-	112-18-5	95-100
Additional components	CAS #	Percent
1-TETRADECANAMINE, N,N-DIMETHYL-	112-75-4	< 5
1-DECANAMINE, N,N-DIMETHYL-	1120-24-7	< 2

## 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

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. 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.

### 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

Dry chemical powder. Foam. Carbon dioxide (CO<sub>2</sub>).

#### Unsuitable extinguishing media

Water. Do not use water jet as an extinguisher, as this will spread the fire.

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

### 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: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills in original containers for re-use. Following product recovery, flush area with water. For waste disposal, see section 13 of the MSDS.

## 7. Handling and Storage

<b>Handling</b>	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.
<b>Storage</b>	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.
<b>Specific uses</b>	Detergent intermediate: follow bulk handling and storage procedures as noted above.

## 8. Exposure Controls / Personal Protection

<b>Engineering controls</b>	Ensure adequate ventilation, especially in confined areas.
<b>Personal protective equipment</b>	
<b>General</b>	Structural firefighters protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations.
<b>Eye / face protection</b>	Do not get in eyes. Chemical goggles are recommended. Face-shield.
<b>Skin protection</b>	Do not get this material in contact with skin. Do not get this material on clothing. Structural firefighters protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations. Chemical resistant gloves. Wear chemical protective equipment that is specifically recommended by the manufacturer. Wear suitable protective clothing and gloves.
<b>Respiratory protection</b>	Do not breathe dust/fume/gas/mist/vapors/spray. Wear positive pressure self-contained breathing apparatus (SCBA).
<b>General hygiene considerations</b>	When using, do not eat, drink or smoke. Do not get in eyes. Do not get this material in contact with skin. Do not get this material on clothing. Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical & Chemical Properties

<b>Appearance</b>	Clear.: Cloudy.
<b>Physical state</b>	Liquid.
<b>Form</b>	Liquid.
<b>Color</b>	Colorless.: Yellow.
<b>Odor</b>	Fishy
<b>Odor threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Vapor pressure</b>	<= 1 mm Hg at 100 F (38 C)
<b>Vapor density</b>	Not available.
<b>Boiling point</b>	399.2 °F (204 °C) @ 760 mm Hg (101.3kPa)
<b>Melting point/Freezing point</b>	Not available.
<b>Solubility (water)</b>	Very slight
<b>Specific gravity</b>	0.8 at 21/21 C
<b>Relative density</b>	Not available.
<b>Flash point</b>	230 °F (110 °C) Pensky-Martens Closed Cup
<b>Flammability limits in air, upper, % by volume</b>	Not available.
<b>Flammability limits in air, lower, % by volume</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Viscosity</b>	3 cP at 27°C

## 10. Chemical Stability & Reactivity Information

<b>Chemical stability</b>	Material is stable under normal conditions.
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<b>Conditions to avoid</b>	Heat, flames and sparks. Avoid temperatures exceeding the flash point.
<b>Materials to avoid</b>	Copper. Strong oxidizing agents. Strong acids.
<b>Hazardous decomposition products</b>	Nitrogen oxides (NOx). Upon decomposition, this product may yield gaseous nitrogen oxides, carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.
<b>Hazardous polymerization</b>	Hazardous polymerization does not occur.

## 11. Toxicological Information

### Toxicological data

Product	Test Results
1-DODECANAMINE, N,N-DIMETHYL- (112-18-5)	Acute Oral LD50 Rat: 740 mg/kg 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
<b>Additional components</b>	
1-DECANAMINE, N,N-DIMETHYL- (1120-24-7)	Acute Oral LD50 Rat: > 2000 mg/kg OECD 401
<b>Sensitization</b>	Not available.
<b>Acute effects</b>	Causes burns.
<b>Local effects</b>	Irritating to respiratory system.
<b>Chronic effects</b>	Not available.
<b>Carcinogenicity</b>	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
<b>Skin corrosion/irritation</b>	Hazardous by OSHA criteria.
<b>Epidemiology</b>	Not available.
<b>Mutagenicity</b>	Not available.
<b>Neurological effects</b>	Not available.
<b>Reproductive effects</b>	Not available.
<b>Teratogenicity</b>	Not available.

## 12. Ecological Information

### Ecotoxicological data

Product	Test Results
1-DODECANAMINE, N,N-DIMETHYL- (112-18-5)	LC50 Bluegill ( <i>Lepomis macrochirus</i> ): 2.1 mg/l 96.00 hours Data for 1-Octadecanamine, N,N-dimethyl (CAS # 124-28-7); expected to be similar LC50 Water flea ( <i>Daphnia magna</i> ): 0.35 mg/l 48.00 hours Data for 1-Octadecanamine, N,N-dimethyl (CAS # 124-28-7); expected to be similar
<b>Additional components</b>	
1-DECANAMINE, N,N-DIMETHYL- (1120-24-7)	EC50 Water flea ( <i>Daphnia magna</i> ): 0.93 mg/l 48.00 hours OECD 203 EL50 Green algae ( <i>Desmodesmus subspicatus</i> ): 14.6 - 46.6 µg/l 72.00 hours OECD 201 LC50 Rainbow trout,donaldson trout ( <i>Oncorhynchus mykiss</i> ): 1.8 mg/l 96.00 hours OECD203 LL50 Zebra danio ( <i>Danio rerio</i> ): 7.2 mg/l 96.00 hours OECD 203 NOEC Rainbow trout,donaldson trout ( <i>Oncorhynchus mykiss</i> ): 0.1 mg/l 96.00 hours OECD 203 NOEL Zebra danio ( <i>Danio rerio</i> ): 4.84 mg/l 96.00 hours OECD 203

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

<b>Ecotoxicity</b>	Toxic to aquatic organisms. Contains a substance which causes risk of hazardous effects to the environment.
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**Environmental effects** An environmental hazard cannot be excluded in the event of unprofessional handling or disposal  
**Persistence / degradability** Expected to be inherently biodegradable.

### 13. Disposal Considerations

**Waste codes** D002: Waste Corrosive material [pH <=2 or =>12.5, or corrosive to steel]  
**Disposal instructions** Collect and reclaim or dispose in sealed containers at licensed waste disposal site. 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.  
**Contaminated packaging** Dispose in accordance with all applicable regulations.

### 14. Transport Information

#### DOT

##### Basic shipping requirements:

**Proper shipping name** Amines, liquid, corrosive, n.o.s. (N,N-Dimethyldodecylamine)  
**Hazard class** 8  
**UN number** UN2735  
**Packing group** III  
**Marine pollutant** N,N-Dimethyldodecylamine  
**Additional information:**  
**Special provisions** IB3, T7, TP1, TP28  
**Packaging exceptions** 154  
**Packaging non bulk** 203  
**Packaging bulk** 241  
**ERG number** 153



DOT

### 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 - No  
Delayed Hazard - No  
Fire Hazard - No  
Pressure Hazard - No  
Reactivity Hazard - No

**Section 302 extremely hazardous substance** No

**Section 311 hazardous chemical** No

**Inventory status**

<b>Country(s) or region</b>	<b>Inventory name</b>	<b>On inventory (yes/no)*</b>
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: 1  
Flammability: 1  
Physical hazard: 0

**NFPA ratings**  
Health: 1  
Flammability: 1  
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** 02-15-2011

**This data sheet contains changes from the previous version in section(s):** Transport Information: General