

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name	AT-1695A
Version #	01
Revision date	02-15-2011
CAS #	112-69-6
MSDS Number	AMINE346
Product use	Intermediate raw material for downstream derivitization.
Synonym(s)	1-Hexadecanamine, N,N-dimethyl-
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-HEXADECANAMINE, N,N-DIMETHYL-	112-69-6	95-100
Additional components	CAS #	Percent
1-OCTADECANAMINE, N,N-DIMETHYL-	124-28-7	< 2.5
1-TETRADECANAMINE, N,N-DIMETHYL-	112-75-4	< 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	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 (CO₂).

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

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

Appearance	Clear.: Cloudy.
Physical state	Liquid.
Form	Liquid.
Color	Colorless.: Yellow.
Odor	Fishy
Odor threshold	Not available.
pH	Not available.
Vapor pressure	<= 1 mm Hg at 100 °F (37.8 °C)
Vapor density	Not available.
Boiling point	626 °F (330 °C) @ 760 mm Hg (101.3kPa)
Melting point/Freezing point	Not available.
Solubility (water)	Very slight
Specific gravity	Not available.
Relative density	0.8 at 21/21 C
Flash point	280.4 °F (137.8 °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. Avoid temperatures exceeding the flash point.

Materials to avoid	Copper. Strong oxidizing agents. Strong acids.
Hazardous decomposition products	Nitrogen oxides (NOx). 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
1-HEXADECANAMINE, N,N-DIMETHYL- (112-69-6)	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
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
1-HEXADECANAMINE, N,N-DIMETHYL- (112-69-6)	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 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

Additional components

Product	Test Results
1-OCTADECANAMINE, N,N-DIMETHYL- (124-28-7)	LC50 Bluegill (Lepomis macrochirus): 2.1 mg/l 96.00 hours River Water LC50 Sheepshead minnow (Cyprinodon variegatus): 8.8 mg/l 96.00 hours Filtered Sea Water LC50 Shrimp (Mysidopsis bahia): 0.074 mg/l 96.00 hours Filtered Sea Water LC50 Water flea (Daphnia magna): 0.35 mg/l 48.00 hours River Water

* 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	Expected to be inherently biodegradable.

13. Disposal Considerations

Waste codes	D002: Waste Corrosive material [pH ≤2 or ≥12.5, or corrosive to steel]
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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

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Basic shipping requirements:

Proper shipping name Amines, liquid, corrosive, n.o.s. (Fatty Tertiary Amine)
Hazard class 8
UN number UN2735
Packing group III
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

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes

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

NFPA ratings

Health: 0
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. The information in the sheet was written based on the best knowledge and experience currently available.

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