SAFETY DATA SHEET

Creation Date 13-Jul-2010 **Revision Date** 04-Apr-2024 **Revision Number** 7

1. Identification

Product Name **N,N-Dimethyloctadecylamine**

Cat No. : **AC408430000; AC408430010; AC408432500**

CAS No 124-28-7
Synonyms Dimethylstearamine; Dymanthine.

Recommended Use Laboratory chemicals.
Uses advised against Food, drug, pesticide or biocidal product use.

Details of the supplier of the safety data sheet

Company

Fisher Scientific Company
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

Emergency Telephone Number
For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11
Emergency Number **US:**001-201-796-7100 / **Europe:** +32 14 57 52 99
CHEMTREC Tel. No. **US:**001-800-424-9300 / **Europe:**001-703-527-3887

2. Hazard(s) identification

Classification
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute oral toxicity	Category 4
Skin Corrosion/Irritation	Category 1 B
Serious Eye Damage/Eye Irritation	Category 1
Specific target organ toxicity (single exposure)	Category 3
Target Organs - Respiratory system.	

Label Elements

Signal Word
Danger

Hazard Statements

Harmful if swallowed
Causes severe skin burns and eye damage
May cause respiratory irritation

Precautionary Statements
Prevention
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Do not breathe dust/fume/gas/mist/vapors/spray
Wear protective gloves/protective clothing/eye protection/face protection
Use only outdoors or in a well-ventilated area
Response
Immediately call a POISON CENTER or doctor/physician
Inhalation
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Skin
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse
Eyes
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Ingestion
Rinse mouth
Do NOT induce vomiting
Storage
Store locked up
Store in a well-ventilated place. Keep container tightly closed
Disposal
Dispose of contents/container to an approved waste disposal plant
Hazards not otherwise classified (HNOC)
Very toxic to aquatic life with long lasting effects

3. Composition/Information on Ingredients

Component	CAS No	Weight %
1-Octadecanamine, N,N-dimethyl-	124-28-7	89
N,N-Dimethyl-1-hexadecylamine	112-69-6	>=3-<5
N,N-Dimethylicosylamine	45275-74-9	>=1-<2.5
1-Tetradecanamine, N,N-dimethyl-	112-75-4	>=1-<2.5
1-Octadecanol	112-92-5	>=1-<2.5
1-Octadecanamine, N-methyl-N-octadecyl-	4088-22-6	>=1-<2.5
Dimethylamine	124-40-3	>=0.1-<0.25

4. First-aid measures

General Advice Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.

Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.
Inhalation	Remove to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.
Ingestion	Do NOT induce vomiting. Call a physician or poison control center immediately.
Most important symptoms and effects	Causes burns by all exposure routes. . Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation: Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated
Notes to Physician	Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media	CO_2, dry chemical, dry sand, alcohol-resistant foam.
Unsuitable Extinguishing Media	No information available
Flash Point	155 °C / 311 °F
Method -	No information available
Autoignition Temperature	No information available
Explosion Limits	
Upper	No data available
Lower	No data available
Sensitivity to Mechanical Impact	No information available
Sensitivity to Static Discharge	No information available

Specific Hazards Arising from the Chemical
The product causes burns of eyes, skin and mucous membranes. Do not allow run-off from fire-fighting to enter drains or water courses.

Hazardous Combustion Products
Carbon monoxide (CO). Carbon dioxide (CO_2). Nitrogen oxides (NOx).
Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

NFPA

Health	Flammability	Instability	Physical hazards
3	1	0	N/A

6. Accidental release measures

Personal Precautions	Ensure adequate ventilation. Use personal protective equipment as required. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas.
Environmental Precautions	Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained. See Section 12 for additional Ecological Information. Avoid release to the environment. Collect spillage.
Methods for Containment and Clean Up	Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

7. Handling and storage

Handling Use only under a chemical fume hood. Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Do not breathe (dust, vapor, mist, gas). Do not ingest. If swallowed then seek immediate medical assistance.

Storage. Keep containers tightly closed in a dry, cool and well-ventilated place. Corrosives area. Incompatible Materials. Strong oxidizing agents. copper. Copper alloys. Strong acids. Metals.

8. Exposure controls / personal protection

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH	Mexico OEL (TWA)
Dimethylamine	TWA: 5 ppm STEL: 15 ppm	(Vacated) TWA: 10 ppm (Vacated) TWA: 18 mg/m³ TWA: 10 ppm TWA: 18 mg/m³	IDLH: 500 ppm TWA: 10 ppm TWA: 18 mg/m³	TWA: 5 ppm STEL: 15 ppm

Legend

ACGIH - American Conference of Governmental Industrial Hygienists
OSHA - Occupational Safety and Health Administration
NIOSH: NIOSH - National Institute for Occupational Safety and Health

Engineering Measures Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protective Equipment

Eye/face Protection Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Recommended Filter type: Organic gases and vapours filter. Type A. Brown. conforming to EN14387.

Hygiene Measures When using do not eat, drink or smoke. Remove and wash contaminated clothing and gloves, including the inside, before re-use.

9. Physical and chemical properties

Physical State	Liquid
Appearance	Light yellow
Odor	Amine compounds
Odor Threshold	No information available
pH	No information available
Melting Point/Range	15 - 20 °C / 59 - 68 °F
Boiling Point/Range	347 °C / 656.6 °F
Flash Point	155 °C / 311 °F
Evaporation Rate	No information available
Flammability (solid,gas)	Not applicable
Flammability or explosive limits	
Upper	No data available
Lower	No data available

Vapor Pressure	<13.3 Pa @ 25 °C
Vapor Density	10.26
Specific Gravity	0.800
Solubility	Slightly soluble in water
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	No information available
Decomposition Temperature	No information available
Viscosity	No information available
Molecular Formula	C20 H43 N
Molecular Weight	297.57

10. Stability and reactivity

Reactive Hazard None known, based on information available

Stability Stable under normal conditions.

Conditions to Avoid Incompatible products. Excess heat.

Incompatible Materials Strong oxidizing agents, copper, Copper alloys, Strong acids, Metals

Hazardous Decomposition Products Carbon monoxide (CO), Carbon dioxide (CO_2), Nitrogen oxides (NOx)

Hazardous Polymerization No information available.

Hazardous Reactions None under normal processing.

11. Toxicological information

Acute Toxicity

Product Information

Oral LD50 Category 4. ATE = 300 - 2000 mg/kg.

Dermal LD50 Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg.

Vapor LC50 Based on ATE data, the classification criteria are not met. ATE > 20 mg/l.

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
1-Octadecanamine, N,N-dimethyl-	LD50 = 2116 mg/kg (Rat)	LD50 = 3432 mg/kg (Rabbit)	Not listed
N,N-Dimethyl-1-hexadecylamine	LD50 > 2000 mg/kg (Rat)	LD50 = 4.29 mL/kg (Rabbit)	Not listed
1-Tetradecanamine, N,N-dimethyl-	LD50 = 1320 mg/kg (Rat)	LD50 = 4400 mg/kg (Rabbit)	Not listed
1-Octadecanol	LD50 > 5 g/kg (Rat)	LD50 > 3 g/kg (Rabbit)	Not listed
1-Octadecanamine, N-methyl-N-octadecyl-	LD50 > 5000 mg/kg (Rat)	LD50 > 2000 mg/kg (Rabbit)	Not listed
Dimethylamine	LD50 = 698 mg/kg (Rat)	LD50 = 3900 mg/kg (Rat)	LC50 = 7340 ppm (Rat) 20 min

Toxicologically Synergistic Products No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation Causes burns by all exposure routes

Sensitization No information available

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

Component	CAS No	IARC	NTP	ACGIH	OSHA	Mexico
1-Octadecanamine, N,N-dimethyl-	124-28-7	Not listed	Not listed	Not listed	Not listed	Not listed

N,N-Dimethyl-1-hexadecylamine	112-69-6	Not listed	Not listed	Not listed	Not listed	Not listed
N,N-Dimethylicosylamine	45275-74-9	Not listed	Not listed	Not listed	Not listed	Not listed
1-Tetradecanamine, N,N-dimethyl-	112-75-4	Not listed	Not listed	Not listed	Not listed	Not listed
1-Octadecanol	112-92-5	Not listed	Not listed	Not listed	Not listed	Not listed
1-Octadecanamine, N-methyl-N-octadecyl-	4088-22-6	Not listed	Not listed	Not listed	Not listed	Not listed
Dimethylamine	124-40-3	Not listed	Not listed	Not listed	Not listed	Not listed

Mutagenic Effects No information available

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

STOT - single exposure Respiratory system
STOT - repeated exposure None known

Aspiration hazard No information available

Symptoms / effects,both acute and delayed Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation: Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated

Endocrine Disruptor Information No information available

Other Adverse Effects The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information.

12. Ecological information

Ecotoxicity

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product contains following substances which are hazardous for the environment.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
1-Octadecanamine, N,N-dimethyl-	Not listed	LC50: = 0.18 mg/L, 96h static (Oncorhynchus mykiss)	Not listed	Not listed
N,N-Dimethyl-1-hexadecylamine	Not listed	LC50: = 0.256 mg/L, 96h semi-static (Danio rerio)	Not listed	Not listed
1-Tetradecanamine, N,N-dimethyl-	Not listed	LC50: = 0.35 mg/L, 96h static (Danio rerio)	Not listed	Not listed
1-Octadecanol	EC50: = 235 mg/L, 96h (Desmodesmus subspicatus)	LC50: > 10000 mg/L, 96h (Brachydanio rerio)	Not listed	EC50: = 1666 mg/L, 48h (Daphnia magna)
Dimethylamine	EC50: = 9 mg/L, 96h (Pseudokirchneriella subcapitata)	LC50: = 396 mg/L, 96h static (Brachydanio rerio) LC50: 127 - 349 mg/L, 96h semi-static (Poecilia reticulata) LC50: = 210 mg/L, 96h static (Poecilia reticulata) LC50: = 120 mg/L, 96h static (Oncorhynchus mykiss) LC50: 111 - 125 mg/L, 96h (Oncorhynchus mykiss)	Not listed	EC50: = 88.7 mg/L, 48h (Daphnia magna Straus)

Persistence and Degradability No information available

Bioaccumulation/ Accumulation No information available.

Mobility No information available.

Component	log Pow
1-Octadecanol	7.4
Dimethylamine	-0.274

13. Disposal considerations

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

Component	RCRA - U Series Wastes	RCRA - P Series Wastes
Dimethylamine - 124-40-3	U092	-

14. Transport information

DOT

UN-No UN2735
Proper Shipping Name AMINES, LIQUID, CORROSIVE, N.O.S.
Technical Name N,N-Dimethyloctadecylamine
Hazard Class 8
Packing Group II

TDG

UN-No UN2735
Proper Shipping Name AMINES, LIQUID, CORROSIVE, N.O.S.
Hazard Class 8
Packing Group II

IATA

UN-No UN2735
Proper Shipping Name AMINES, LIQUID, CORROSIVE, N.O.S.
Hazard Class 8
Packing Group II

IMDG/IMO

UN-No UN2735
Proper Shipping Name AMINES, LIQUID, CORROSIVE, N.O.S.
Hazard Class 8
Packing Group II

15. Regulatory information

United States of America Inventory

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	TSCA - EPA Regulatory Flags
1-Octadecanamine, N,N-dimethyl-	124-28-7	X	ACTIVE	-
N,N-Dimethyl-1-hexadecylamine	112-69-6	X	ACTIVE	-
N,N-Dimethylicosylamine	45275-74-9	-	-	-
1-Tetradecanamine, N,N-dimethyl-	112-75-4	X	ACTIVE	-
1-Octadecanol	112-92-5	X	ACTIVE	-
1-Octadecanamine, N-methyl-N-octadecyl-	4088-22-6	X	ACTIVE	-
Dimethylamine	124-40-3	X	ACTIVE	-

Legend:
TSCA US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)
X - Listed

'-' - Not Listed

TSCA - Per 40 CFR 751, Regulation of Certain Chemical Substances & Mixtures, Under TSCA Section 6(h) (PBT) Not applicable

TSCA 12(b) - Notices of Export Not applicable

International Inventories

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (KECL).

Component	CAS No	DSL	NDSL	EINECS	PICCS	ENCS	ISHL	AICS	IECSC	KECL
1-Octadecanamine, N,N-dimethyl-	124-28-7	X	-	204-694-8	X	X	X	X	X	KE-11574
N,N-Dimethyl-1-hexadecylamine	112-69-6	X	-	203-997-2	X	X	X	X	X	KE-11451
N,N-Dimethylicosylamine	45275-74-9	-	-	256-216-2	-	X	X	-	-	-
1-Tetradecanamine, N,N-dimethyl-	112-75-4	X	-	204-002-4	X	X	X	X	X	KE-11864
1-Octadecanol	112-92-5	X	-	204-017-6	X	X	X	X	X	KE-26419
1-Octadecanamine, N-methyl-N-octadecyl-	4088-22-6	-	X	223-819-7	-	X	X	X	X	KE-24524
Dimethylamine	124-40-3	X	-	204-697-4	X	X	X	X	X	KE-11124

KECL - NIER number or KE number (http://ncis.nier.go.kr/en/main.do)

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Component	CAS No	Weight %	SARA 313 - Threshold Values %	SARA 313 - Reporting threasholds
Dimethylamine	124-40-3	>=0.1-<0.25	1.0 %	-

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

Component	CWA - Hazardous Substances	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants
Dimethylamine	X	1000 lb	-	-

Clean Air Act Not applicable

OSHA - Occupational Safety and Health Administration Not applicable

Component	Specifically Regulated Chemicals	Highly Hazardous Chemicals
Dimethylamine	-	TQ: 2500 lb

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355).

Component	Hazardous Substances RQs	CERCLA Extremely Hazardous Substances RQs	SARA Reportable Quantity (RQ)
Dimethylamine	1000 lb	-	1000 lb 454 kg

California Proposition 65 This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Dimethylamine	X	X	X	-	X

U.S. Department of Transportation
Reportable Quantity (RQ): Y
DOT Marine Pollutant N
DOT Severe Marine Pollutant N

U.S. Department of Homeland Security This product contains the following DHS chemicals:
Legend - STQs = Screening Threshold Quantities, APA = A placarded amount

Component	DHS Chemical Facility Anti-Terrorism Standard
Dimethylamine	Release STQs - 10000lb

Other International Regulations

Mexico - Grade Slight risk, Grade 1

Authorisation/Restrictions according to EU REACH

Component	CAS No	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
1-Octadecanamine, N,N-dimethyl-	124-28-7	-	-	-
N,N-Dimethyl-1-hexadecylamine	112-69-6	-	-	-
N,N-Dimethylicosylamine	45275-74-9	-	-	-
1-Tetradecanamine, N,N-dimethyl-	112-75-4	-	-	-
1-Octadecanol	112-92-5	-	-	-
1-Octadecanamine, N-methyl-N-octadecyl-	4088-22-6	-	-	-
Dimethylamine	124-40-3	-	Use restricted. See item 75. (see link for restriction details)	-

REACH links
https://echa.europa.eu/substances-restricted-under-reach

Safety, health and environmental regulations/legislation specific for the substance or mixture

Component	CAS No	OECD HPV	Persistent Organic Pollutant	Ozone Depletion Potential	Restriction of Hazardous Substances (RoHS)
1-Octadecanamine, N,N-dimethyl-	124-28-7	Listed	Not applicable	Not applicable	Not applicable
N,N-Dimethyl-1-hexadecylamine	112-69-6	Listed	Not applicable	Not applicable	Not applicable
N,N-Dimethylicosylamine	45275-74-9	Not applicable	Not applicable	Not applicable	Not applicable
1-Tetradecanamine, N,N-dimethyl-	112-75-4	Listed	Not applicable	Not applicable	Not applicable
1-Octadecanol	112-92-5	Listed	Not applicable	Not applicable	Not applicable
1-Octadecanamine, N-methyl-N-octadecyl-	4088-22-6	Listed	Not applicable	Not applicable	Not applicable
Dimethylamine	124-40-3	Listed	Not applicable	Not applicable	Not applicable

Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?
Not applicable

Other International Regulations

Component	CAS No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements	Rotterdam Convention (PIC)	Basel Convention (Hazardous Waste)
1-Octadecanamine, N,N-dimethyl-	124-28-7	Not applicable	Not applicable	Not applicable	Not applicable
N,N-Dimethyl-1-hexadecylamine	112-69-6	Not applicable	Not applicable	Not applicable	Not applicable
N,N-Dimethylicosylamine	45275-74-9	Not applicable	Not applicable	Not applicable	Not applicable
1-Tetradecanamine, N,N-dimethyl-	112-75-4	Not applicable	Not applicable	Not applicable	Not applicable
1-Octadecanol	112-92-5	Not applicable	Not applicable	Not applicable	Not applicable
1-Octadecanamine, N-methyl-N-octadecyl-	4088-22-6	Not applicable	Not applicable	Not applicable	Not applicable
Dimethylamine	124-40-3	Not applicable	Not applicable	Not applicable	Not applicable

16. Other information

Prepared By
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Revision Summary This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

Disclaimer
The information provided in 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text

End of SDS