SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name : Octadecyl dimethylamine

1.2 Relevant identified uses of the substance or mixture and uses advised against

Uses of the Substance / Mixture : Specific use(s): Intermediate

Specific use(s): Industrial use as intermediate under strictly controlled conditions., The substance / product is registered with strictly controlled conditions as defined in Article 18(4) of Regulation (EC) No. 1907 / 2006 (REACH Regulation) and must therefore be handled as such.

1.3 Details of the supplier of the safety data sheet

Company : Chem International, Inc.
6099 Ponders Court
Greenville, SC 29615
Telephone number: 864-458-7868

1.4 Emergency telephone

FOR EMERGENCIES INVOLVING A SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT CONTACT:
CHEMTREC 800-424-9300 within the United States and Canada

SECTION 2: Hazards identification

Although OSHA has not adopted the environmental portion of the GHS regulations, this document may include information on environmental effects.

2.1 Classification of the substance or mixture

HCS 2012 (29 CFR 1910.1200)

Acute toxicity, Category 4	H302: Harmful if swallowed.
Skin corrosion, Category 1B	H314: Causes severe skin burns and eye damage.
Serious eye damage, Category 1	H318: Causes serious eye damage.

2.2 Label elements

HCS 2012 (29 CFR 1910.1200)

Pictogram :

Signal Word : Danger

Hazard Statements:

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.

Precautionary Statements:

Prevention

P264	Wash skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response

P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.
P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353	IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor/ physician.
P363	Wash contaminated clothing before reuse.

Storage

P405	Store locked up.

Disposal

P501	Dispose of contents/ container to an approved waste disposal plant.

2.3 Other hazards which do not result in classification

H400: Very toxic to aquatic life.
H410: Very toxic to aquatic life with long lasting effects.

SECTION 3: Composition/information on ingredients

3.1 Substance

Synonyms : N, N-Dimethyloctadecanamine

Hazardous Ingredients and Impurities

Chemical Name	Identification number CAS-No.	Concentration [%]
1-Octadecanamine, N,N-dimethyl-	124-28-7	95 - 99
1-Hexadecanamine, N,N-dimethyl-	112-69-6	< 3.5
Eicosanamine, N,N-Dimethyl-	45275-74-9	< 1.5
1-Tetradecanamine, N,N-dimethyl-	112-75-4	< 1

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

3.2 Mixture

Not applicable, this product is a substance.

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice : Show this material safety data sheet to the doctor in attendance.
First responder needs to protect himself.
Place affected apparel in a sealed bag for subsequent decontamination.
Plan first aid action before beginning work with this product.

If inhaled : Remove victim from exposure and then have him lie down in the recovery position.
If breathing is difficult, give oxygen.
If breathing has stopped, apply artificial respiration.
Consult a physician.

Skin contact : In case of contact, immediately flush skin with plenty of water for at least 30 minutes.
Remove contaminated clothing and shoes.
Seek medical advice.
Discard contaminated shoes and clothing.

Eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Get immediate medical advice/ attention.
Show this material safety data sheet to the doctor in attendance.

Ingestion : Do not induce vomiting without medical advice.
If victim is conscious:
Rinse mouth with water.
Keep at rest.
Do not give anything to drink.
Do not leave the victim unattended.
Vomiting may occur spontaneously
Risk of product entering the lungs on vomiting after ingestion.
Lay victim on side.
Seek medical advice.

4.2 Most important symptoms and effects, both acute and delayed

Risks	:	Skin contact may aggravate existing skin disease Inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema or bronchitis

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician	:	All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred. Treat symptomatically. There is no specific antidote available.

SECTION 5: Firefighting measures

Flash point	:	> 200 °F (> 93 °C) Flammability class: Will burn
Autoignition temperature	:	no data available
Flammability / Explosive limit	:	no data available

5.1 Extinguishing media

Suitable extinguishing media	:	Extinguishing media - small fires Dry chemical Carbon dioxide (CO2) Extinguishing media - large fires Foam Water spray
Unsuitable extinguishing media	:	High volume water jet (frothing possible)

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting	:	Under fire conditions: Will burn Corrosive or suffocating vapors are released. Container may rupture on heating. On combustion or on thermal decomposition (pyrolysis), releases: Nitrogen oxides (NOx) Carbon oxides

5.3 Advice for firefighters

Special protective equipment for fire-fighters	:	Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing.

		In the event of fire, wear self-contained breathing apparatus. Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing
Specific firefighting methods	:	Cool down the containers / equipment exposed to heat with a water spray. Ensure that there is NO direct contact between the water and the product. Do not use a solid water stream as it may scatter and spread fire. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Further information	:	In the event of fire and/or explosion do not breathe fumes. Standard procedure for chemical fires. Use a water spray to cool fully closed containers.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions, protective equipment and emergency procedures	:	Wear suitable protective equipment. For further information refer to section 8 "Exposure controls / personal protection." Avoid contact with the skin and the eyes.

6.2 Environmental precautions

Environmental precautions	:	Do not flush into surface water or sanitary sewer system. Take all necessary measures to avoid accidental discharge of products into drains and waterways due to the rupture of containers or transfer systems. Spills may be reportable to the National Response Center (800-424-8802) and to state and/or local agencies

6.3 Methods and materials for containment and cleaning up

Methods for containment	:	Stop the leak. Turn leaking containers leak-side up to prevent the escape of liquid. Dam up with sand or inert earth (do not use combustible materials).
Recovery	:	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Shovel or sweep up. Keep in suitable, closed containers for disposal. Never return spills in original containers for re-use.
Decontamination / cleaning	:	Clean contaminated surface thoroughly. Flush with plenty of water. Recover the cleaning water for subsequent disposal. Decontaminate tools, equipment and personal protective equipment in a segregated area.
Disposal	:	Dispose of in accordance with local regulations.
Additional advice	:	The product should not be allowed to enter drains, water courses or the soil.

6.4 Reference to other sections

Reference to other sections	:	7. HANDLING AND STORAGE 8. EXPOSURE CONTROLS/PERSONAL PROTECTION 13. DISPOSAL CONSIDERATIONS

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling and usage	:	Handle in accordance with good industrial hygiene and safety practice. Avoid inhalation, ingestion and contact with skin and eyes. The product must only be handled by specifically trained employees.
Hygiene measures	:	Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this materials: 1) Do not store, use, and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored. 2) Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics, or using the toilet. 3) Wash exposed skin promptly to remove accidental splashes or contact with material.

7.2 Conditions for safe storage, including any incompatibilities

Technical Measures for storage	:	Take all necessary measures to avoid accidental discharge of products into drains and waterways due to the rupture of containers or transfer systems.

Storage conditions

Recommended	:	Keep in a cool, well-ventilated place. Store in original container. Keep tightly closed.
To be avoided	:	Keep away from open flames, hot surfaces and sources of ignition. Keep away from combustible material. Keep away from incompatible materials to be indicated by the manufacturer
Incompatible products	:	Do not mix with incompatible materials (See list, section 10).

Packaging Measures

Packaging materials—Recommended	:	Plastic drum, Plastic materials.
Packaging materials—To be avoided	:	Metals

Storage stability

Storage temperature	:	39 - 104 °F (4 - 40 °C)

7.3 Specific end use(s)

No data available

SECTION 8: Exposure controls/personal protection

Introductory Remarks:
These recommendations provide general guidance for handling this product. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. While developing safe handling procedures, do not overlook the need to clean equipment and piping systems for maintenance and repairs. Waste resulting from these procedures should be handled in accordance with Section 13: Disposal Considerations.

Assistance with selection, use and maintenance of worker protection equipment is generally available from equipment manufacturers.

8.1 Control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Control measures

Engineering measures	:	Where engineering controls are indicated by use conditions or a potential for excessive exposure exists, the following traditional exposure control techniques may be used to effectively minimize employee exposures : Effective exhaust ventilation system Avoid splashes.

Personal protective equipment

Respiratory protection	:	When respirators are required, select NIOSH/MSHA approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industrial recommendations. Use a respirator with an approved filter if a risk assessment indicates this is necessary. In the case of hazardous fumes, wear self-contained breathing apparatus.
Hand protection	:	Where there is a risk of contact with hands, use appropriate gloves Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Gloves must be inspected prior to use. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
Eye protection	:	Eye and face protection requirements will vary dependent upon work environment conditions and material handling practices. Appropriate ANSI Z87 approved equipment should be selected for the particular use intended for this material. Eye contact should be prevented through the use of:

Safety glasses with side-shields
Face-shield

Skin and body protection : Recommended preventive skin protection

impervious clothing
Footwear protecting against chemicals
Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Remove and wash contaminated clothing before re-use.

Hygiene measures : Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this materials:
1) Do not store, use, and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored.
2) Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics, or using the toilet.
3) Wash exposed skin promptly to remove accidental splashes or contact with material.

Protective measures : Ensure that eyewash stations and safety showers are close to the workstation location.
Emergency equipment immediately accessible, with instructions for use.
The protective equipment must be selected in accordance with current local standards and in cooperation with the supplier of the protective equipment.
Selection of appropriate personal protective equipment should be based on an evaluation of the performance characteristics of the protective equipment relative to the task(s) to be performed, conditions present, duration of use, and the potential hazards, and/or risks that may occur during use.

SECTION 9: Physical and chemical properties

Physical and Chemical properties here represent typical properties of this product. Contact the business area using the Product information phone number in Section 1 for its exact specifications.

9.1 Information on basic physical and chemical properties

Appearance	:	Form : liquid Physical state: liquid (77 °F (25 °C)) Color: clear to cloudy
Odor	:	ammoniacal
Odor Threshold	:	no data available
pH	:	Not applicable, insoluble product
Melting point/freezing point	:	70 °F (21 °C)
Boiling point/boiling range	:	653 - 680 °F (345 - 360 °C) (760 mmHg (1,013.25 hPa))
Flash point	:	> 200 °F (> 93 °C)

Flammability class: Will burn

Evaporation rate (Butylacetate = 1)	:	< 1
Flammability (solid, gas)	:	no data available
Flammability (liquids)	:	no data available
Flammability / Explosive limit	:	no data available
Autoignition temperature	:	no data available
Vapor pressure	:	no data available
Vapor density	:	no data available
Density	:	0.8 g/cm3 (77 °F (25 °C)) Relative density : ca. 0.8 (77 °F (25 °C))
Solubility	:	Water solubility: practically insoluble
Partition coefficient: n-octanol/water	:	no data available
Thermal decomposition	:	no data available
Viscosity	:	no data available
Explosive properties	:	no data available
Oxidizing properties	:	Not considered as oxidizing. Structure-activity relationship (SAR)

9.2 Other information

Molecular weight	:	ca. 299 g/mol

SECTION 10: Stability and reactivity

10.1 Reactivity

Reactivity	:	Stable at normal ambient temperature and pressure.

10.2 Chemical stability

Chemical stability	:	Stable under normal conditions.

10.3 Possibility of hazardous reactions

Polymerization	:	Hazardous polymerization does not occur.

10.4 Conditions to avoid

Conditions to avoid	:	Keep away from heat and sources of ignition.

10.5 Incompatible materials

Materials to avoid	:	Strong oxidizing agents Strong acids Copper Zinc Aluminum and its alloys. Peroxides Zinc and its alloys. Metals (Phenol).

10.6 Hazardous decomposition products

Decomposition products	:	On combustion or on thermal decomposition (pyrolysis), releases: Carbon oxides Nitrogen oxides (NOx)

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Acute oral toxicity	:	Harmful if swallowed. Information given is based on data obtained from similar substances. internal evaluation Information refers to the main constituent
Acute inhalation toxicity	:	no data available
Acute dermal toxicity	:	no data available
Acute toxicity (other routes of administration)	:	no data available

Skin corrosion/irritation

Skin irritation	:	Causes burns. Information given is based on data obtained from similar substances. internal evaluation Information refers to the main constituent

Serious eye damage/eye irritation

Eye irritation	:	Risk of serious damage to eyes. Information given is based on data obtained from similar substances. internal evaluation Information refers to the main constituent

Respiratory or skin sensitization

Sensitization : Maximization Test (GPMT) - Guinea pig
Does not cause skin sensitization.
Unpublished reports
Information refers to the main constituent

Mutagenicity

Genotoxicity in vitro : Ames test
with and without metabolic activation
negative
Unpublished reports
Information refers to the main constituent

Genotoxicity in vivo : no data available

Carcinogenicity

Carcinogenicity : no data available

This product does not contain any ingredient designated as probable or suspected human carcinogens by:
NTP
IARC
OSHA
ACGIH

Toxicity for reproduction and development

Toxicity to reproduction / fertility : no data available

Developmental Toxicity/Teratogenicity : Rabbit
Dermal
Method: OECD Test Guideline 414
No embryotoxic effects have been observed in animal tests.
Unpublished reports
Information refers to the main constituent

STOT

STOT-single exposure : Toxicology Assessment:
The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT-repeated exposure : Toxicology Assessment:
The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
internal evaluation, Information refers to the main constituent

Oral - Rat
NOAEL: 2 mg/kg bw/day
Subchronic toxicity
Not considered to cause serious damage to health on repeated exposure
Unpublished reports
Information refers to the main constituent

Aspiration toxicity

Aspiration toxicity : no data available

SECTION 12: Ecological information

12.1 Toxicity

Aquatic Compartment

Acute toxicity to fish	:	LC50 - 96 h : 0.30 mg/l - Lepomis macrochirus (Bluegill sunfish) Very toxic to fish. Unpublished reports Information refers to the main constituent
Acute toxicity to daphnia and other aquatic invertebrates.	:	LC50 - 48 h : 0.042 mg/l - Daphnia magna (Water flea) Method: OECD Test Guideline 202 Very toxic to aquatic organisms. Unpublished reports Information refers to the main constituent
Toxicity to aquatic plants	:	EC50 - 72 h : < 0.00085 mg/l - Pseudokirchneriella subcapitata (green algae) Method: OECD Test Guideline 201 Very toxic to algae. Growth rate Unpublished reports Information refers to the main constituent
Toxicity to microorganisms	:	EC50 - 3 h : > 1,000 mg/l - activated sludge Method: OECD Test Guideline 209 Information refers to the main constituent
Chronic Toxicity to aquatic plants	:	NOEC: < 0.00085 mg/l - 72 h - Pseudokirchneriella subcapitata (green algae) Method: OECD Test Guideline 201 Very toxic to algae. Unpublished reports Information refers to the main constituent

Ecotoxicity assessment

Acute aquatic toxicity	:	Very toxic to aquatic life.
Chronic aquatic toxicity	:	Very toxic to aquatic life with long lasting effects.

M-Factor

1-Octadecanamine, N,N-dimethyl-	:	Acute aquatic toxicity = 1,000 Chronic aquatic toxicity = 10 (according to the Globally Harmonized System (GHS))

12.2 Persistence and degradability

Biodegradability

Biodegradability : Inherently biodegradable.
The product itself has not been tested.
Information given is based on data obtained from similar products

Method: OECD Test Guideline 301
68 % - 28 d
Readily biodegradable.
The 10 day time window criterion is not fulfilled.
CO2 evolution test
Unpublished reports
Information refers to the main constituent

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment

Results of PBT and vPvB assessment : This substance is not considered to be persistent, bioaccumulating, and toxic (PBT)., This substance is not considered to be very persistent and very bioaccumulating (vPvB).

12.6 Other adverse effects

Environment assessment : Very toxic to aquatic life.
Very toxic to aquatic life with long lasting effects.
Information refers to the main constituent

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product Disposal

Advice on Disposal : Chemical additions, processing or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate or otherwise inappropriate. Please be advised that state and local requirements for waste disposal may be more restrictive or otherwise different from federal laws and regulations. Consult state and local regulations regarding the proper disposal of this material.

Waste Code : RCRA:
Hazardous Waste – YES

Advice on cleaning and disposal of packaging

Advice on Disposal	:	Rinse with an appropriate solvent. Dispose of contents/container in accordance with local regulation.

SECTION 14: Transport information

Transportation status: IMPORTANT! Statements below provide additional data on listed transport classification.
The listed Transportation Classification does not address regulatory variations due to changes in package size, mode of shipment or other regulatory descriptors.

DOT

14.1 UN number	UN 2735
14.2 Dangerous Good Description	UN 2735 AMINES, LIQUID, CORROSIVE, N.O.S. (fatty tertiary amine), 8, II
14.3 Transport hazard class	8
14.4 Packing group	
Packing group	II
Label(s)	8
ERG No	153
14.5 Environmental hazards	YES
Marine pollutant	

TDG

14.1 UN number	UN 2735
14.2 Dangerous Good Description	UN 2735 AMINES, LIQUID, CORROSIVE, N.O.S. (fatty tertiary amine), 8, II
14.3 Transport hazard class	8
14.4 Packing group	
Packing group	II
Label(s)	8
ERG No	153
14.5 Environmental hazards	YES
Marine pollutant	

IMDG

14.1 UN number	UN 2735
14.2 Dangerous Good Description	UN 2735 AMINES, LIQUID, CORROSIVE, N.O.S. (fatty tertiary amine), 8, II, IMDG Code Segregation Group 18 - Alkalis
IMDG Code segregation group	Alkalis
14.3 Transport hazard class	8
14.4 Packing group	

Packing group	II
Label(s)	8
EmS	F-A , S-B

14.5 Environmental hazards YES
Marine pollutant

14.6 Special precautions for user
For personal protection see section 8.

IATA

14.1 UN number UN 2735

14.2 Dangerous Good Description UN 2735 AMINES, LIQUID, CORROSIVE, N.O.S. (fatty tertiary amine), 8, II

14.3 Transport hazard class 8

14.4 Packing group

Packing group	II
Label(s):	8
Packing instruction (cargo aircraft)	855
Max net qty / pkg	30.00 L
Packing instruction (passenger aircraft)	851
Max net qty / pkg	1.00 L

14.5 Environmental hazards YES
Marine pollutant

14.6 Special precautions for user
For personal protection see section 8.

Note: The above regulatory prescriptions are those valid on the date of publication of this sheet. Given the possible evolution of transportation regulations for hazardous materials, it would be advisable to check their validity with your sales office.

SECTION 15: Regulatory information

15.1 Notification status

United States TSCA Inventory	:	YES (positive listing) On TSCA Inventory
Canadian Domestic Substances List (DSL)	:	YES (positive listing) All components of this product are on the Canadian DSL.
Australia Inventory of Chemical Substances (AICS)	:	YES (positive listing) On the inventory, or in compliance with the inventory
Japan. CSCL - Inventory of Existing and New Chemical Substances	:	YES (positive listing) On the inventory, or in compliance with the inventory
Korea. Korean Existing Chemicals Inventory (KECI)	:	YES (positive listing) On the inventory, or in compliance with the inventory
China. Inventory of Existing Chemical Substances in China (IECSC)	:	YES (positive listing) On the inventory, or in compliance with the inventory

15.2 Federal Regulations

SARA 311/312 Hazards

Fire Hazard	no
Reactivity Hazard	no
Sudden Release of Pressure Hazard	no
Acute Health Hazard	yes
Chronic Health Hazard	no

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

Ingredients	CAS-No.	Reportable quantity
Dimethylamine	124-40-3	1000 lb

SARA 304 Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Reportable Quantity
This material does not contain any components with a SARA 302 RQ.

15.3 State Regulations

California Prop 65	:	This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

SECTION 16: Other information

NFPA-Classification

Health	:	3 serious
Flammability	:	1 slight
Instability or Reactivity	:	0 minimal

HMIS-Classification

Health	:	3 serious
Flammability	:	1 slight
Reactivity	:	0 minimal

Further information

Date Prepared	:	09/28/2018
Further information	:	Product classified under the US GHS format.

Key or legend to abbreviations and acronyms used in the safety data sheet

ACGIH	:	American Conference of Governmental Industrial Hygienists
OSHA	:	Occupational Safety and Health Administration
WHMIS	:	Workplace Hazardous Materials Information System
NTP	:	National Toxicology Program
IARC	:	International Agency for Research on Cancer
NIOSH	:	National Institute for Occupational Safety and Health
NFPA	:	National Fire Protection Association
HMIS	:	Hazardous Materials Identification System (Paint & Coating)

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. Such information is only given as a guidance to help the user handle, use, process, store, transport, dispose, and release the product in satisfactory safety conditions and is not to be considered as a warranty or quality specification. It should be used in conjunction with technical sheets but do not replace them. Thus, the information only relates to the designated specific product and may not be applicable if such product is used in combination with other materials or in another manufacturing process, unless otherwise specifically indicated. It does not release the user from ensuring he is in conformity with all regulations linked to its activity.