

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

- Trade name OLEYL DIAMINE

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

- For industrial use only.

1.3 Details of the supplier of the safety data sheet**Company**

CHEM INTERNATIONAL
6099 Ponders Court
Greenville, SC 29615 US
Telephone: 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**HCS2012(29CFR1910.1200)**

Acute toxicity, Category 4
Skin corrosion, Category 1B
Serious eye damage, Category 1
Specific target organ systemic toxicity - repeated exposure
Category 1
Specific target organ systemic toxicity - repeated exposure, Category 2

H302: Harmful if swallowed.
H314: Causes severe skin burns and eye damage.
H318: Causes serious eye damage.
H372: Causes damage to organs through prolonged or repeated exposure.

H373: May cause damage to organs through prolonged or repeated exposure if swallowed. (Gastrointestinal tract, Liver, Respiratory Tract), Oral

2.2 Label elements**HCS2012(29CFR1910.1200)****Pictogram****Signal Word**

- Danger

Hazard Statements

- H302 Harmful if swallowed.
- H314 Causes severe skin burns and eye damage.
- H372 Causes damage to organs through prolonged or repeated exposure.
- H373 May cause damage to organs (Gastrointestinal tract, Liver, Respiratory Tract) through prolonged or repeated exposure if swallowed.

Precautionary Statements

Prevention

- P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
- 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 + P330 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.
- 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 + P310 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.
- P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.
- P314 Get medical advice/ attention if you feel unwell.
- 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

Hazardous Ingredients and Impurities

Chemical Name	Identification number CAS-No.	Concentration [%]
1,3-Propanediamine, N1-(9Z)-9-octadecen-1-yl-	7173-62-8	≥ 90 - < 95
9-Octadecen-1-amine, (9Z)-	112-90-3	≥ 5 - < 10

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.

In case of inhalation

- If breathed in, move person into fresh air.
- If breathing is difficult, give oxygen.
- If victim has stopped breathing:
 - administer CPR (cardio-pulmonary resuscitation)
 - Get immediate medical advice/ attention.

In case of skin contact

- In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
- Seek medical advice.
- Wash contaminated clothing before re-use.

In case of 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.

In case of ingestion

- Do NOT induce vomiting.
- Do not give anything to drink.
- Obtain medical attention.

- Do not leave the victim unattended.
- Vomiting may occur spontaneously
- Risk of product entering the lungs on vomiting after ingestion.
- Lay victim on side.

4.2 Most important symptoms and effects, both acute and delayed**Effects**

- 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.

SECTION 5: Firefighting measures



<u>Flash point</u>	>212 °F (100 °C) closed cup
	Flammability class: Will burn
<u>Autoignition temperature</u>	no data available
<u>Flammability/Explosive limit</u>	no data available

5.1 Extinguishing media

Suitable extinguishing media

- Dry chemical
- Carbon dioxide (CO₂)
- Foam
- Alcohol-resistant foam
- Multipurpose powders

Unsuitable extinguishing media

- Water spray jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire fighting

- Under fire conditions:
- Will burn
- Hazardous decomposition products formed under fire conditions

Hazardous combustion products:

- On combustion or on thermal decomposition (pyrolysis), releases:
- Nitrogen oxides (NO_x)
- 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.
- For further information refer to section 8 "Exposure controls / personal protection."

Specific fire fighting methods

- Cool closed containers exposed to fire with water spray.
- Do not allow run-off from fire fighting to enter drains or water courses.
- Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- Use personal protective equipment.
- Avoid contact with the skin and the eyes.
- Stop the leak. Turn leaking containers leak-side up to prevent the escape of liquid.
- The product must only be handled by specifically trained employees.



6.2 Environmental precautions

- Prevent further leakage or spillage if safe to do so.
- Contain the spilled material by diking.
- Do not allow uncontrolled discharge of product into the environment.
- 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

Recovery

- Absorb the product onto porous material.
- Shovel into suitable container for disposal.
- Non-sparking tools should be used.

Decontamination / cleaning

- Clean contaminated surface thoroughly.
- Recover the cleaning water for subsequent disposal.

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

- 7. HANDLING AND STORAGE
- 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
- 13. DISPOSAL CONSIDERATIONS

SECTION 7: Handling and storage

7.1 Precautions for safe handling

- Vapor extraction at source
- Provide adequate ventilation.
- Avoid inhalation, ingestion and contact with skin and eyes.
- Avoid inhalation of vapor or mist.
- Do NOT handle in a confined space.
- Keep away from heat.
- Do not puncture.

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/Storage conditions**

- Take all necessary measures to avoid accidental discharge of products into drains and waterways due to the rupture of containers or transfer systems.
- Keep in a cool, well-ventilated place.
- Store in original container.
- Keep tightly closed.
- 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
- Keep away from: Do not mix with incompatible materials (See list, section 10).

7.3 Specific end use(s)

- Consult the technical guidelines for the use of this substance/mixture.

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. 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.

Hazardous components without workplace control parameters

Chemical name	Identification number CAS-No.	Exposure Limit Values
1,3-Propanediamine, N1-(9Z)-9-octadecen-1-yl-	7173-62-8	None
9-Octadecen-1-amine, (9Z)-	112-90-3	None

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 :
- Facilities and equipment easily cleanable.
- Provide adequate ventilation.

Individual protection measures**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.

Hand protection

- Impervious 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.

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:
- Tightly fitting safety goggles
- Face-shield

Skin and body protection

- Preventive skin protection
- Impervious clothing
- Footwear protecting against chemicals
- Protective suit
- Choose body protection according to the amount and concentration of the dangerous substance at the work place.

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

- Handle in accordance with good industrial hygiene and safety practice.
- 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.
- Ensure that eye flushing systems and safety showers are located close to the working place.
- 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.

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

<u>Appearance</u>	<u>Form</u> : liquid <u>Physical state</u> : liquid (77 °F (25 °C)) <u>Color</u> : yellow
<u>Odor</u>	slight ammoniacal
<u>Odor Threshold</u>	no data available
<u>Molecular weight</u>	ca. 324 g/mol
<u>pH</u>	no data available
<u>Melting point/freezing point</u>	48 - 86 °F (9 - 30 °C)
<u>Boiling point/boiling range</u>	> 482 °F (250 °C) (760 mmHg (1,013.25 hPa))
<u>Flash point</u>	> 212 °F (100 °C) closed cup
	Flammability class: Will burn

<u>Evaporation rate (Butylacetate = 1)</u>	no data available
<u>Flammability(solid,gas)</u>	no data available
<u>Flammability(liquids)</u>	no data available
<u>Flammability/Explosive limit</u>	no data available
<u>Autoignition temperature</u>	no data available
<u>Vapor pressure</u>	no data available
<u>Vapor density</u>	no data available
<u>Density</u>	ca. 0.84 g/cm ³ (77 °F (25 °C))
<u>Relative density:</u>	ca. 0.84 (77 °F (25 °C))
<u>Solubility</u>	<u>Solubility in other solvents:</u> Ethanol : soluble
<u>Partition coefficient: n-octanol/water</u>	no data available
<u>Thermal decomposition</u>	no data available
<u>Viscosity</u>	no data available
<u>Explosive properties</u>	no data available
<u>Oxidizing properties</u>	Not considered as oxidizing., Structure-activity relationship (SAR)

9.2 Other information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

- Stable at normal ambient temperature and pressure.

10.2 Chemical stability

- Stable under normal conditions.

10.3 Possibility of hazardous reactions

Polymerization

- Hazardous polymerization does not occur.

10.4 Conditions to avoid

- Keep away from heat and sources of ignition.

10.5 Incompatible materials

- Oxidizing agents
- Acids
- Copper
- Copper alloys
- Aluminum and its alloys.
- Zinc and its alloys.

10.6 Hazardous decomposition products

- Carbon dioxide (CO₂)
- Carbon monoxide
- Nitrogen oxides (NO_x)

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Acute oral toxicity

1,3-Propanediamine, N1-(9Z)-9-octadecen-1-yl-

LD50 : ca. 500 mg/kg - Rat
Method: OECD Test Guideline 423
Harmful if swallowed.
Unpublished reports

9-Octadecen-1-amine, (9Z)-

LD50 : 1,689 mg/kg - Rat
Method: OECD Test Guideline 401
Harmful if swallowed.
Unpublished reports

Acute inhalation toxicity

No data available

Acute dermal toxicity

No data available

Acute toxicity (other routes of administration)

No data available

Skin corrosion/irritation

1,3-Propanediamine, N1-(9Z)-9-octadecen-1-yl-

Rabbit
Corrosive to skin
Method: OECD Test Guideline 404
Unpublished reports

Serious eye damage/eye irritation

1,3-Propanediamine, N1-(9Z)-9-Octadecen-1-yl-

Risk of serious damage to eyes
Unpublished reports

<u>Respiratory or skin sensitization</u>	No data available
<u>Mutagenicity</u>	
Genotoxicity in vitro	Product is not considered to be genotoxic According to the data on the constituents According to the classification criteria for mixtures.
Genotoxicity in vivo	Product is not considered to be genotoxic According to the data on the constituents According to the classification criteria for mixtures.
<u>Carcinogenicity</u>	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

1,3-Propanediamine, N1-(9Z)-9-
Octadecen-1-yl-

Oral
Method: OECD Test Guideline 414
The product is not considered to be embryotoxic/fetotoxic.
Unpublished reports.

STOT**STOT-single exposure**

1,3-Propanediamine, N1-(9Z)-9-
octadecen-1-yl-

The substance or mixture is not classified as specific target organ toxicant,
single exposure according to GHS criteria. Internal evaluation.

STOT-repeated exposure

1,3-Propanediamine, N1-(9Z)-9-
octadecen-1-yl-

The substance or mixture is classified as specific target organ toxicant,
repeated exposure, category 1 according to GHS criteria.
Unpublished reports.

1,3-Propanediamine, N1-(9Z)-9-
octadecen-1-yl-

Oral NOAEL: 1.25/mg / kg / day
Repeated dose (28 days) toxicity (oral)
Causes damage to organs through prolonged or repeated exposure if swallowed.
Unpublished reports.

Aspiration toxicity

No data available

SECTION 12: Ecological information**12.1 Toxicity****Aquatic Compartment**

Acute toxicity to fish	The product itself has not been tested.
Acute toxicity to daphnia and other aquatic invertebrates.	The product itself has not been tested.
Toxicity to aquatic plants	The product itself has not been tested.
Toxicity to microorganisms	The product itself has not been tested.
Chronic toxicity to fish	The product itself has not been tested.
Chronic toxicity to daphnia and other Aquatic invertebrates	The product itself has not been tested.
Chronic toxicity to aquatic plants	No data available

Terrestrial Compartment

Toxicity to soil dwelling organisms	The product itself has not been tested.
Toxicity to terrestrial plants	The product itself has not been tested.
Toxicity to above ground organisms	The product itself has not been tested.

12.2 Persistence and degradability**Degradability assessment**

Conclusion is not possible due to incomplete or heterogeneous data on the components

12.3 Bioaccumulative potential**Bioconcentration factor (BCF)**

Conclusion is not possible due to incomplete or heterogeneous data on the components

12.4 Mobility in soil**Adsorption potential (Koc)**

Conclusion is not possible due to incomplete or heterogeneous data on the components

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

no data available

SECTION 13: Disposal considerations**13.1 Waste treatment methods****Product Disposal**

- Chemical additions, processing or otherwise altering this material may make the waste management information presented in this SDS 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

- Environmental Protection Agency
- Hazardous Waste – NO

Advice on cleaning and disposal of packaging

- 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 Proper shipping name	AMINES, LIQUID, CORROSIVE, N.O.S. (fatty diamine)
14.3 Transport hazard class	8
Label(s)	8
14.4 Packing group	III
Packing group	
ERG No	153
14.5 Environmental hazards	YES
Marine pollutant	

TDG

14.1 UN number	UN 2735
14.2 Proper shipping name	AMINES, LIQUID, CORROSIVE, N.O.S. (fatty diamine)
14.3 Transport hazard class	8
Label(s)	8
14.4 Packing group	III
Packing group	
ERG No	153

14.5 Environmental hazards YES
Marine pollutant

IMDG

14.1 UN number UN 2735
14.2 Proper shipping name AMINES, LIQUID, CORROSIVE, N.O.S. (fatty diamine)
IMDG Code segregation group Alkalis
14.3 Transport hazard class 8
Label(s) 8
14.4 Packing group
Packing group II
14.5 Environmental hazards YES
Marine pollutant
14.6 Special precautions for user
EmS F-A, S-B

For personal protection see section 8.

IATA

14.1 UN number UN 2735
14.2 Proper shipping name AMINES, LIQUID, CORROSIVE, N.O.S. (fatty diamine)
14.3 Transport hazard class 8
Label(s): 8
14.4 Packing group
Packing group II
14.5 Environmental hazards YES
Marine pollutant
14.6 Special precautions for user
Packing instruction (cargo aircraft) 855
Max net qty / pkg 30.00
L Packing instruction (passenger aircraft) 851
Max net qty / pkg 1.00 L

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**

Inventory information	Status
United States TSCA	Listed on inventory
Canadian Domestic Substances List (DSL)	Listed on inventory
Australia Inventory of Chemical Substances (AICS)	Listed on inventory
Japan CSCL – Inventory of Existing and New Chemical Substances	Listed on inventory
China Inventory of Existing Chemical Substances in China (IECSC)	Listed on inventory
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	Listed on inventory

15.2 Federal Regulations**US. EPA EPCRA SARA Title III****SARA HAZARD DESIGNATION SECTIONS 311/312 (40 CFR 370)**

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

Section 313 Toxic Chemicals (40 CFR 372.65)

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.

Section 302 Emergency Planning Extremely Hazardous Substance Threshold Planning Quantity (40 CFR 355)

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

Section 302 Emergency Planning Extremely Hazardous Substance Reportable Quantity (40 CFR 355)

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

Section 304 Emergency Release Notification Reportable Quantity (40 CFR 355)

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

US. EPA CERCLA Hazardous Substances and Reportable Quantities (40 CFR 302.4)

This material does not contain any components with a CERCLA RQ.

15.3 State Regulations**US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 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 (National Fire Protection Association) - Classification

Health	3 serious
Flammability	1 slight
Instability or Reactivity	0 minimal

HMIS (Hazardous Materials Identification System (Paint & Coating)) - Classification

Health	3 serious
Flammability	1 slight
Reactivity	0 minimal
PPE	Determined by User; dependent on local conditions

Further information

- Mixture in CLP Format
- Product evaluated under the US GHS format.

Date Prepared: 09/28/2018

- American Conference of Governmental Industrial Hygienists
- Occupational Safety and Health Administration
- National Toxicology Program
- International Agency for Research on Cancer
- National Institute for Occupational Safety and Health

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.