



1-HEXADECENE, 95%
 Safety Data Sheet ENEH1170
 Date of issue: 11/30/2016 Version: 1.0

SECTION 1: Identification

1.1. Product identifier

Product name : 1-HEXADECENE, 95%
 Product code : ENEH1170
 Product form : Substance
 Physical state : Solid
 Formula : C16H32
 Synonyms : CETENE
 N-HEXADECENE
 HEXADECYLENE
 HEXADEC-1-ENE
 Chemical family : HYDROCARBON

1.2. Recommended use of the chemical and restrictions on use

Recommended use : Chemical intermediate
 For research and industrial use only

1.3. Details of the supplier of the safety data sheet

GELEST, INC.
 11 East Steel Road
 Morrisville, PA 19067
USA
 T 215-547-1015 - F 215-547-2484 - (M-F): 8:00 AM - 5:30 PM EST
info@gelest.com - www.gelest.com

1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Not classified

2.2. Label elements

GHS-US labeling

No labeling applicable

2.3. Hazards not otherwise classified (HNOC)

No additional information available

2.4. Unknown acute toxicity (GHS US)

No data available

SECTION 3: Composition/Information on ingredients

3.1. Substance

Substance type : Multi-constituent
 Name : 1-HEXADECENE, 95%
 CAS No : 629-73-2

| Name | Product identifier | % | GHS-US classification |
|-----------------------|----------------------|----------|-----------------------|
| 1-Hexadecene | (CAS No) 629-73-2 | 93 - 100 | Not classified |
| 2-Ethyl-1-tetradecene | (CAS No) 56919-55-2 | 0 - 2 | Not classified |
| 2-Hexyl-1-decene | (CAS No) 13043-55-5 | 0 - 2 | Not classified |
| 2-Butyl-1-dodecene | (CAS No) 115146-98-0 | 0 - 2 | Not classified |
| n-Octadecane | (CAS No) 593-45-3 | 0 - 1 | Not classified |

Full text of hazard classes and H-statements : see section 16

3.2. Mixture

Not applicable

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4.1. Description of first aid measures

| | |
|---------------------------------------|--|
| First-aid measures general | : Remove contaminated clothing and shoes. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). If possible show this sheet; if not available show packaging or label. |
| First-aid measures after inhalation | : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If you feel unwell, seek medical advice. |
| First-aid measures after skin contact | : Wash with plenty of soap and water. Get medical advice/attention. |
| First-aid measures after eye contact | : Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention. |
| First-aid measures after ingestion | : Never give anything by mouth to an unconscious person. Get medical advice/attention. |

4.2. Most important symptoms and effects, both acute and delayed

| | |
|--------------------------------------|--|
| Symptoms/injuries after inhalation | : May be harmful if inhaled. |
| Symptoms/injuries after skin contact | : May cause mild skin irritation. May be harmful in contact with skin. |
| Symptoms/injuries after eye contact | : May cause mild eye irritation. |
| Symptoms/injuries after ingestion | : May be harmful if swallowed. |

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

| | |
|--------------------------------|---|
| Suitable extinguishing media | : Water spray. Water fog. Foam. Carbon dioxide. Dry chemical. |
| Unsuitable extinguishing media | : None known. |

5.2. Special hazards arising from the substance or mixture

| | |
|-------------|---|
| Fire hazard | : Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame. |
|-------------|---|

5.3. Advice for firefighters

| | |
|--------------------------------|--|
| Firefighting instructions | : Exercise caution when fighting any chemical fire. Use water spray or fog for cooling exposed containers. |
| Protection during firefighting | : Do not enter fire area without proper protective equipment, including respiratory protection. Avoid contact with skin and eyes. Do not breathe dust. |

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

| | |
|----------------------|--|
| Protective equipment | : Wear protective equipment as described in Section 8. |
| Emergency procedures | : Evacuate unnecessary personnel. |

6.1.2. For emergency responders

| | |
|----------------------|--|
| Protective equipment | : Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection". |
|----------------------|--|

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

| | |
|-------------------------|--|
| For containment | : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. |
| Methods for cleaning up | : Sweep or shovel spills into appropriate container for disposal. |

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

| | |
|-------------------------------|--|
| Precautions for safe handling | : Avoid contact with skin and eyes. Do not breathe dust. Avoid dust formation. Provide local exhaust or general room ventilation to minimize exposure to dust. |
| Hygiene measures | : Wash contaminated clothing before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. |

7.2. Conditions for safe storage, including any incompatibilities

| | |
|------------------------|---|
| Storage conditions | : Keep container tightly closed. |
| Incompatible materials | : Oxidizing agent. |
| Storage area | : Store in a well-ventilated place. Store away from heat. |

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

| | |
|----------------------------------|---|
| Appropriate engineering controls | : Provide local exhaust or general room ventilation. |
| Personal protective equipment | : Avoid all unnecessary exposure. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. |
| Hand protection | : Neoprene or nitrile rubber gloves. |
| Eye protection | : Chemical goggles. Contact lenses should not be worn. |
| Skin and body protection | : Wear suitable protective clothing. |
| Respiratory protection | : Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. NIOSH-certified dust and mist (orange cartridge) respirator. |

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|---|----------------------------------|
| Physical state | : Solid |
| Appearance | : Waxy solid. |
| Molecular mass | : 224.43 g/mol |
| Color | : No data available |
| Odor | : Distinct. Mild. |
| Odor threshold | : No data available |
| Refractive index | : 1.4412 |
| pH | : No data available |
| Relative evaporation rate (butyl acetate=1) | : < 1 |
| Melting point | : 4 °C |
| Freezing point | : No data available |
| Boiling point | : 284 °C |
| Flash point | : 132 °C |
| Auto-ignition temperature | : 224 °C |
| Decomposition temperature | : No data available |
| Flammability (solid, gas) | : No data available |
| Vapor pressure | : 0.0001 mm Hg @ 25°C |
| Relative vapor density at 20 °C | : 7.72 |
| Relative density | : 0.781 |
| Solubility | : Insoluble in water. |
| Log Pow | : No data available |
| Log Kow | : No data available |
| Viscosity, kinematic | : 3.8 cSt @ 20°C |
| Viscosity, dynamic | : No data available |
| Explosive properties | : No data available |
| Oxidizing properties | : No data available |
| Explosion limits | : 0.5 - 5.8 vol % (lower; upper) |

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

No additional information available

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10.4. Conditions to avoid

Heat. Open flame. Sparks.

10.5. Incompatible materials

Oxidizing agent.

10.6. Hazardous decomposition products

Organic acid vapors.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

| 1-Hexadecene (629-73-2) | |
|----------------------------|---------------------------------------|
| LD50 oral rat | > 10000 mg/kg RTECS Number: MM0479000 |
| LD50 dermal rabbit | > 10000 mg/kg |
| n-Octadecane (593-45-3) | |
| LD50 oral rat | > 5000 mg/kg |
| LD50 dermal rat | > 3160 mg/kg |
| LC50 inhalation rat (mg/l) | 5.8 mg/l (6hr) |
| ATE US (vapors) | 5.800 mg/l/4h |
| ATE US (dust, mist) | 5.800 mg/l/4h |

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

None of the components in this product at concentrations >0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

Symptoms/injuries after inhalation : May be harmful if inhaled.

Symptoms/injuries after skin contact : May cause mild skin irritation. May be harmful in contact with skin.

Symptoms/injuries after eye contact : May cause mild eye irritation.

Symptoms/injuries after ingestion : May be harmful if swallowed.

SECTION 12: Ecological information

12.1. Toxicity

| 1-Hexadecene (629-73-2) | |
|-------------------------|------------------------|
| EC50 Daphnia 1 | > 1000 mg/l |
| n-Octadecane (593-45-3) | |
| LC50 fish 1 | > 1028 mg/l |
| EC50 Daphnia 1 | > 3193 mg/l Crustacean |

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on ozone layer : No additional information available

Effect on the global warming : No known effects from this product.

GWPMix comment : No known effects from this product.

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SECTION 13: Disposal considerations

13.1. Waste treatment methods

| | |
|---------------------------------|---|
| Sewage disposal recommendations | : Do not dispose of waste into sewer. |
| Waste disposal recommendations | : Incinerate. Dispose in a safe manner in accordance with local/national regulations. |
| Ecology - waste materials | : Avoid release to the environment. |

SECTION 14: Transport information

14.1. UN number

Not regulated for transport.

14.2. UN proper shipping name

Not applicable

14.3. Additional information

Other information : No supplementary information available.

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

1-Hexadecene (629-73-2)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

n-Octadecane (593-45-3)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

2-Ethyl-1-tetradecene (56919-55-2)

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

2-Butyl-1-dodecene (115146-98-0)

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

2-Hexyl-1-decene (13043-55-5)

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

1-Hexadecene (629-73-2)

Listed on the Canadian DSL (Domestic Substances List)

n-Octadecane (593-45-3)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

1-Hexadecene (629-73-2)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

n-Octadecane (593-45-3)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

National regulations

1-Hexadecene (629-73-2)

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

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n-Octadecane (593-45-3)

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on INSQ (Mexican National Inventory of Chemical Substances)

2-Ethyl-1-tetradecene (56919-55-2)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

2-Butyl-1-dodecene (115146-98-0)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

2-Hexyl-1-decene (13043-55-5)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the Korean ECL (Existing Chemicals List)

15.3. US State regulations

No additional information available

SECTION 16: Other information

Abbreviations and acronyms

: Abbreviations: ND: Not Determined, No Data; NA: Not Applicable; LD: Lethal Dose; LC: Lethal Concentration; ATE: Acute Toxicity Estimates; H: hour; °: °C unless otherwise stated; mm: millimeters Hg, torr; PEL: permissible exposure level; TWA: time weighted average; TLV: threshold limit value; TG: Test Guideline; NIOSH: National Institute for Occupational Safety and Health; IARC: International Agency for Research on Cancer; NTP: National Toxicology Program; HMIS: Hazardous Material Information System; CAS No.: Chemical Abstract Service Registration Number; EC No.: European Commission Registration Number; EC Index No.: European Commission Index Number; OECD: The Organisation for Economic Co-operation and Development; GHS: The Globally Harmonized System of Classification and Labelling.

HMIS III Rating

Health : 1 Slight Hazard - Irritation or minor reversible injury possible
Flammability : 2 Moderate Hazard - Materials which must be moderately heated or exposed to high ambient temperatures before ignition will occur. Includes liquids having a flash point at or above 100 F but below 200 F. (Classes II & IIIA)
Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Prepared by safety and environmental affairs.

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SDS US (GHS HazCom 2012) - Custom

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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