1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Ashland	Regulatory Information Number	1-800-325-3751
P.O. Box 2219	Telephone	614-790-3333
Columbus, OH 43216	Emergency telephone number	1-800-ASHLAND (1-800-274-5263)

Product name	HEPTANE
Product code	20063
Product Use Description	No data

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance: liquid,, colourless

DANGER! FLAMMABLE LIQUID AND VAPOR. MAY AFFECT THE CENTRAL NERVOUS SYSTEM CAUSING DIZZINESS, HEADACHE OR NAUSEA. MAY CAUSE RESPIRATORY TRACT IRRITATION. MAY BE HARMFUL IF INHALED OR SWALLOWED. MAY CAUSE EYE IRRITATION. MAY CAUSE SKIN AND RESPIRATORY TRACT IRRITATION.PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE DERMATITIS AND BURNS. PROLONGED OR REPEATED CONTACT MAY DRY THE SKIN AND CAUSE IRRITATION AND BURNS.

Potential Health Effects

Routes of Exposure

Inhalation, Skin absorption, Skin contact, Eye Contact, Ingestion

Eye Contact

May cause mild eye irritation. Symptoms include stinging, tearing, and redness.

Skin Contact

Can cause skin irritation. Prolonged or repeated contact may dry the skin. Symptoms may include redness, burning, and drying and cracking of skin, burns and other skin damage. Passage of this material into the body through the skin is possible, but it is unlikely that this would result in harmful effects during safe handling and use.

Ingestion

Swallowing small amounts of this material during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful. Swallowing small amounts of this material during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful. This material can get into the lungs during swallowing or vomiting. This results in lung inflammation and other lung injury.

Inhalation

Breathing of vapor or mist is possible. Breathing small amounts of this material during normal handling is not likely to cause harmful effects. Breathing large amounts may be harmful. Breathing small amounts of this material during normal handling is not likely to cause harmful effects. Breathing large amounts may be harmful. Symptoms are not expected at air concentrations below the recommended exposure limits, if applicable (see Section 8.).

Aggravated Medical Condition

Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material:, skin, lung (for example, asthma-like conditions), auditory system, Individuals with preexisting heart disorders maybe more susceptible to arrhythmias (irregular heartbeats) if exposed to high concentrations of this material.

Symptoms

Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include:, stomach or intestinal upset (nausea, vomiting, diarrhea), irritation (nose, throat, airways), central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness), temporary changes in mood and behavior, loss of appetite, loss of coordination, irregular heartbeat, narcosis (dazed or sluggish feeling)

Target Organs

Overexposure to this material (or its components) has been suggested as a cause of the following effects in laboratory animals:, mild, reversible kidney effects, effects on hearing, central nervous system damage

Carcinogenicity

There is no information available. The chance of this material causing cancer is unknown. This material is not listed as a carcinogen by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), or the Occupational Safety and Health Administration (OSHA).

Reproductive Hazard

There are no data available for assessing risk to the fetus from maternal exposure to this material.

Other Information

No data

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Concentration
n-HEPTANE	142-82-5	<=100%

4. FIRST AID MEASURES

Eyes

If symptoms develop, move individual away from exposure and into fresh air. Flush eyes gently with water while holding eyelids apart. If symptoms persist or there is any visual difficulty, seek medical attention.

Skin

Remove contaminated clothing. Flush exposed area with large amounts of water. If skin is damaged, seek immediate medical attention. If skin is not damaged and symptoms persist, seek medical attention. Launder clothing before reuse.

Ingestion

Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. Contact a physician, medical facility, or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended.

Inhalation

If symptoms develop, move individual away from exposure and into fresh air. If symptoms persist, seek medical attention. If breathing is difficult, administer oxygen. Keep person warm and quiet; seek immediate medical attention.

Notes to Physician

Hazards: Inhalation of high concentrations of this material, as could occur in enclosed spaces or during deliberate abuse, may be associated with cardiac arrhythmias. Sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to this material. This material is an aspiration hazard. Potential danger from aspiration must be weighed against possible oral toxicity (See Section 2 - Swallowing) when deciding whether to induce vomiting.

Treatment: No information available.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

foam, dry chemical, carbon dioxide (CO2)

Hazardous Combustion Products

May form:, carbon dioxide and carbon monoxide, various hydrocarbons

Precautions for Fire-Fighting

Material is volatile and readily gives off vapors which may travel along the ground or be moved by ventilation and ignited by pilot lights, flames, sparks, heaters, smoking, electric motors, static discharge or other ignition sources at locations near the material handling point. Wear full firefighting turn-out gear (full Bunker gear), and respiratory protection (SCBA). Use water spray to cool fire exposed containers and structures until fire is out if it can be done with minimal risk. Avoid spreading burning liquid with water used for cooling purposes.

Flammability Class for Flammable Liquids

Flammable Liquid Class IBFlammable Liquid Class IB

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions

For personal protection see section 8. Eliminate all ignition sources (flares, flames including pilot lights, electrical sparks). Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source. Prevent from entering drains, sewers, streams or other bodies of water. Prevent from spreading. If runoff occurs, notify authorities as required. Pump or vacuum transfer spilled product to clean containers for recovery. Absorb unrecoverable product. Transfer contaminated absorbent, soil and other materials to containers for disposal.

Environmental Precautions

Prevent run-off to sewers, streams or other bodies of water. If run-off occurs, notify proper authorities as required, that a spill has occurred.

Methods for Cleaning Up

Absorb liquid on vermiculite, floor absorbent or other absorbent material.

7. HANDLING AND STORAGE

Handling

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Static ignition hazard can result from handling and use. Electrically bond and ground all containers, personnel and equipment before transfer or use of material. Special precautions may be necessary to dissipate static electricity for non-conductive containers. Use proper bonding and grounding during product transfer as described in National Fire Protection Association document NFPA 77.

Storage

Store in a cool, dry, ventilated area, away from incompatible substances. Do not store near extreme heat, open flame, or sources of ignition. Keep container closed when not in use.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

n-HEPTANE	**142-82-5**	
ACGIH	time weighted average	400 ppm
ACGIH	Short term exposure limit	500 ppm
NIOSH	Recommended exposure limit (REL):	85 ppm
NIOSH	Recommended exposure limit (REL):	350 mg/m3
NIOSH	Ceiling Limit Value and Time Period (if specified):	440 ppm
NIOSH	Ceiling Limit Value and Time Period (if specified):	1,800 mg/m3
OSHA Z1	Permissible exposure limit	500 ppm
OSHA Z1	Permissible exposure limit	2,000 mg/m3
OSHA Z1A	time weighted average	400 ppm
OSHA Z1A	time weighted average	1,600 mg/m3
OSHA Z1A	Short term exposure limit	500 ppm
OSHA Z1A	Short term exposure limit	2,000 mg/m3
US CA OEL	Time Weighted Average (TWA) Permissible Exposure Limit (PEL):	400 ppm
US CA OEL	Time Weighted Average (TWA) Permissible Exposure Limit (PEL):	1,600 mg/m3
US CA OEL	Short term exposure limit	500 ppm
US CA OEL	Short term exposure limit	2,000 mg/m3

General Advice

These recommendations provide general guidance for handling this product. Personal protective equipment should be selected for individual applications and should consider factors which affect exposure potential, such as handling practices, chemical concentrations and ventilation. It is ultimately the responsibility of the employer to follow regulatory guidelines established by local authorities.

Exposure Controls

Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV(s).

Eye Protection

Chemical splash goggles in compliance with OSHA regulations are advised; however, OSHA regulations also permit other type safety glasses. Consult your safety representative.

Skin and Body Protection

Wear resistant gloves (consult your safety equipment supplier).
To prevent repeated or prolonged skin contact, wear impervious clothing and boots.

Respiratory Protection

If workplace exposure limit(s) of product or any component is exceeded (see exposure guidelines), a NIOSH-approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH respirators (negative pressure type) under specified conditions (see your industrial hygienist). Engineering or administrative controls should be implemented to reduce exposure.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	liquid
Form	Liquid,
Colour	colourless
Odour	hydrocarbon-like
Boiling point/range	199.9 °F / 93.3 °C@ 760 mmHg
Melting point/range	-132 °F / -91 °C
pH	No data
Flash point	25.02 °F / -3.88 °C Closed Cup
Evaporation rate	2.80 (N-Butyl Acetate)
Explosion limits	1.05 %(V) 6.7 %(V)
Vapour pressure	5.3328 kPa @ 72.1 °F / 22.3 °C
Vapour density	3.500

Density	0.696 g/cm3 @ 60.00 °F / 15.56 °C 5.8 lb/gal @ 61 °F / 16 °C
Solubility	negligible in water
Partition coefficient (n-octanol/water)	No data
Autoignition temperature	399 °F / 204 °C

10. STABILITY AND REACTIVITY

Stability
Stable.

Conditions to Avoid
Avoid contact with:

Incompatible Products
Avoid contact with:, alkalis, strong acids, strong oxidizing agents

Hazardous Decomposition Products
May form:, carbon dioxide and carbon monoxide, various hydrocarbons

Hazardous Reactions
Product will not undergo hazardous polymerization.

Thermal Decomposition
No data

11. TOXICOLOGICAL INFORMATION

Acute Oral Toxicity

n-HEPTANE	LD 50 Rat: 15,000 mg/kg

Acute Inhalation Toxicity

n-HEPTANE	LC 50 Rat: 103 g/m3, 4 h

Acute Dermal Toxicity

n-HEPTANE	LD 50 Rabbit: 2,000 mg/kg

12. ECOLOGICAL INFORMATION

Aquatic Toxicity

Acute and Prolonged Toxicity to Fish
No data

Acute Toxicity to Aquatic Invertebrates
No data

Environmental Fate and Pathways
No data

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods Dispose of in accordance with all applicable local, state and federal regulations. For assistance with your waste management needs - including disposal, recycling and waste stream reduction, contact Ashland Distribution's Environmental Services Group at 800-637-7922.For assistance with your waste management needs - including disposal, recycling and waste stream reduction, contact Ashland Distribution's Environmental Services Group at 800-637-7922.

14. TRANSPORT INFORMATION

IMDG:
UN1206, HEPTANES 3, II
IATA_P:
UN1206, Heptanes 3, II
IATA_C:
UN1206, Heptanes 3, II
CFR_ROAD:
UN1206, Heptanes 3, II
CFR_RAIL:
UN1206, Heptanes 3, II
CFR_INWTR:
UN1206, Heptanes 3, II
IMDG_INWTR:
UN1206, HEPTANES 3, II

IMDG_ROAD:
UN1206, HEPTANES 3, II
IMDG_RAIL:
UN1206, HEPTANES 3, II

Dangerous goods descriptions (if indicated above) may not reflect package size, quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

15. REGULATORY INFORMATION

California Prop. 65
WARNING! This product contains a chemical known in the State of California to cause cancer.
BENZENE

WARNING! This product contains a chemical known in the State of California to cause birth defects or other reproductive harm.
BENZENE
TOLUENE

This product does not contain any chemicals known to State of California to cause cancer, birth defects or any other harm.

Additional Regulations
US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)
US. Toxic Substances Control Act (TSCA) Section 4(a) Final Test Rules & Testing Consent Orders (40 CFR 799, Subpts B-D)
US. Toxic Substances Control Act (TSCA) Section 8(a) Inventory Update Rule (EPA Form U Instructions, App A)
US. Toxic Substances Control Act (TSCA) Section 8(a) Preliminary Assessment Information Rule (PAIR) (40 CFR 712, Subpt B)
US. Toxic Substances Control Act (TSCA) Section 8(d) Health & Safety Data Reporting (40 CFR 716, Subpt B)
US. Toxic Substances Control Act (TSCA) Section 8(d) Health & Safety Data Reporting (40 CFR 716, Subpt B)
US. Toxic Substances Control Act (TSCA) Section 8(d) Health & Safety Data Reporting (40 CFR 716, Subpt B)

US. OSHA Hazard Communication Standard: On One of the Floor Lists of the OSHA HCS (29 CFR 1910.1200).
US. High Production Volume Chemicals

US. Toxic Substances Control Act (TSCA) Section 4 - Master Testing List

OECD. Program to investigate the potential hazards of high production volume further work.
US. TSCA IUR 2006, Partially Exempt Petroleum Process Streams (40 CFR 710.46(b)(1))

SARA Hazard Classification Fire Hazard
Acute Health Hazard

SARA 313 Component(s)

OSHA Hazards Flammable Liquid
Moderate skin irritant
Moderate eye irritant

OSHA Hazards Flammable Liquid
Moderate skin irritant
Mild eye

	Health	Flammability	Reactivity	Other
HMIS	1	3	0	
NFPA	1	3	0	

16. OTHER INFORMATION

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This MSDS has been prepared by Ashland's Environmental Health and Safety Department (1-800-325-3751).