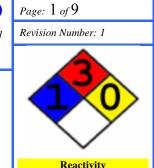


According to the Directives 91/155/CEE-2001/58/CE-ISO 11014-1

Product Name:

Hexane



Health

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

Identification of the substance or preparation: Hexane

Country of origin: Iran (Islamic Republic of Iran)

CAS Number: 110 - 54 - 3

Synonyms: n-hexane, normal hexane, hexvl hydride

Company/undertaking identification **National Petrochemical Company**

Iran Petrochemical Commercial Company

(IPCC)

Manufacturer subcontractor: None

00982188881735 **Emergency phone number:**

Contact email: msds@petrochem-ir.net 00982188839511 Fax:

Association/Organization: None

Use of the substance/Preparation: None

2. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous substances:

Hexane is harmful and highly flammable liquid or vapor.

Pentane vapors can form an explosive mixture with air.

Hazardous label(s):





Toxicological characteristics:

Substances present at a concentration below the minimum danger:

Other component:

Hexane may be toxic to the nervous system, skin and central nervous system (CNS).

Prolonged or repeated exposure to the substance can produce target organ damage.

3. IDENTIFICATION OF HAZARDS

Risk phrases:

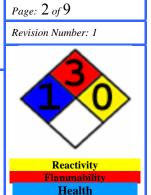
- -Highly flammable liquid and vapor. Vapor may cause flash fire.
- -Harmful or fatal if swallowed, it could enter lungs and damage it.
- -May cause respiratory tract irritation if inhaled.
- -Vapor harmful.



According to the Directives 91/155/CEE-2001/58/CE-ISO 11014-1

Product Name:

Hexane



-May cause eye irritation

-Cause skin irritation

-Inhalation may cause nervous system effects -contains material may cause central nervous

system effects.

Skin contact: Causes skin irritation. Prolonged repeated

contact may cause drying and cracking of the skin. Symptoms may include pain, itching, discoloration, swelling and blistering.

Causes eye irritation and prolonged

impairment of your vision that depend on the

speed of first aid treatment.

Inhalation: High concentration may cause nausea,

headache, dizziness, unconsciousness, coma and

death.

Respiratory tract irritation may include coughing and difficulty in breathing. CNS effects may occur, at high concentration CNS

depression, tremors, convolution.

If swallowed: May cause central nervous system depression,

characterized by excitement, followed by headache, dizziness, drowsiness, and nausea. May cause collapse, unconsciousness, coma and possible death due to respiratory failure. Aspiration of material into the lungs may cause chemical pneumonitis, which may be fatal. Once in the lungs it is very difficult to remove

and can cause severe injury or death.

Other information:

Eye contact:

4. FIRST AID MEADURES

In case of exposure by inhalation:

As a general rule, in case of doubt or if symptoms persist, always call a doctor NEVER induce swallowing in an unconscious person.

Skin contact: Remove contaminated clothing and

shoes. Wash with soap and water. If irritation persist or develop get medical attention. Wash clothing before reuse. Remove to fresh air. If not breathing,

give artificial respiration. If breathing is

difficult, give oxygen. Get medical attention immediately if breathing

difficulties continue.

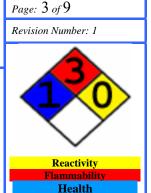
In case of splashes or contact with eyes: Flash with plenty of water. Remove any



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In case of swallowing: Note of physician:

Note to physicians

contact lenses. Continue flushing eyes with plenty of water for at least 15 minutes. Get medical attention. Do not induce vomiting. Loose in tight clothing like tie, collar or belt. Get medical attention immediately. Ingestion of this product or subsequent

vomiting may result in aspiration of light hydrocarbon liquid, which may cause

pneumonias

5. FIRE FIGHTING MEASURES

Flammable class: Highly flammable liquid and vapor.

Vapor may cause flash fire.

Auto ignition temperature: 225 C

Flash point: -22 C LEL: 1.1 UEL:7.7%

Suitable extinguishing media: Small fire: use dry chemical and CO2

Large fire: use water spray or fog and

foam

Cool containing vessels with water jet in order to prevent pressure build up and

explode.

Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases:

Special protective equipment for fire fighting:

Other information:

Highly depend on combustion condition. Mostly carbon oxides (CO, CO2)

Some undefined organic material may be released.

6. ACCIDENTAL RELEASE MEASURES

Environmental precautions:

Personal precautions: Remove all sources of ignition safely. Evacuate

contaminated area immediately. Monitor area by gas detector. Wear appropriate personal protective equipment when cleaning up spills.

Protect from contamination of soil, water and

under ground water.



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Hexane

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Reactivity lammabili Health

Methods for cleaning up and disposal:

Keep away from all sources of ignition and heat. Stop leak without risk. Absorb with dry earth, sands and non-combustible materials and put spilled material in appropriate waste disposal.

Prevent entry to sewers, basements. Be careful the concentration must not exceed than TLV.

ALL TOOLS FOR CLEANING MUST BE

NON-SPARKING.

HANDLING EQUIPMENT MUST BE

GROUNDED

Other information: Local authorities and regulations must be

considered as priority.

7. HANDLING AND STORAGE

The regulations relating to storage premises apply to workshop where the

product is handled

Handling:

Storage:

Keep away from heat and all sources of ignition.

Keep container tightly closed. Ground all equipments containing hexane .Avoid contact with skin, breathe vapors and

fumes, ingest the material

Keep away storages from heat and all sources of ignition. Store at cool and good ventilated condition. Protect from static

charges.

Empty vessels may contain explosive mixtures and take care of that.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limit values: OSHA(PEL): TWA 500 PPM

inhalation

OSHA(PEL): TWA 1800 mg/m3

inhalation

ACGIH(TLV): TWA 176 mg/m3 skin ACGIH(TLV): TWA 50 PPM skin

Consult with local authorities.

Effective ventilation. Remove sources of

ignition from the working area.

Personal protective equipment:

Exposure controls:



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Eye protection: Safety glasses, chemical goggles or face

shields.

Respiratory protection: If exposure may be greater than exposure

limit wear a NIOSH approved respirator,

such as air purifying respirator for

organic vapors.

Use a positive pressure, air supplying respirator if there is potential for

uncontrolled release or exposure levels are

not known.

Hand protection: gloves

Skin and body protection: Appropriate clothing, gloves, boots that

have good physical and chemical

resistance.

Health measures:

Environmental exposure controls:

9. PHYSICAL AND CHEMICAL PROPERTIES

General information: Hexane

Appearance (at 20°C): Colourless liquid Colour: Colourless

Odour: Gasoline-like or petroleum-like (slight)

PH (at 20°C): Not applicable

Boiling point/range ($^{\circ}$ C): 67 $^{\circ}$ C -68 $^{\circ}$ C (152.6 $^{\circ}$ F - 156.2 $^{\circ}$ F)

Melting point (°C): -95° C (-139° F) Flash point (°C): -23° C (-9.4° F) Flammability: Highly flammable

Auto-ignition temperature(°C): 234 °C

Explosive properties: Readily forms explosive mixture with air.

LEL: 1.2% UEL:7.7%

Specific gravity: 0.659

Vapour pressure (at 20°C):

Vapour density (at 20°C):

2.5 PSIA (132 mmHg)

3 (Air=1)

Evaporation rate: 28.6 (butyl acetate = 1)

Solubility (at 20°C): water solubility:negilible

solubility in fats: soluble in oil

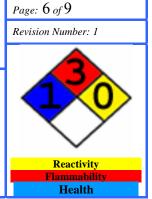
Other information: None



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10. STABILITY AND REACTIVITY

Material to avoid:

Stability: stable

Conditions to avoid: Avoid from heat and all sources of ignition and

incompatible materials.

Readily forms explosive mixtures with air.

Oxidizing agent, chlorine, fluorine and

magnesium per chlorate

Hazardous decomposition products: Carbon mono oxide and carbon dioxide may

form at decomposition temperature.

11. TOXICOLOGICAL INFORMATION

Acute toxicity: - LD₅₀, oral, rat (mg.kg⁻¹): 28700

-LC 50, rat (mg/m3/4hr) : 48000 PPM/4h

- LD₅₀, oral, mouse (mg.kg⁻¹): 446 -LCLO,mouse (g/m3/2hr) : 325

- LD₅₀, dermal (mg.kg⁻¹):

Sub chronic – chronic toxicity:

Sensibilization:

Carcinogenicity:

No data available

No data available

No data available

Reproductive effects:

Human experience:

No data available

May cause impaired fertility

Other information: Harmful by inhalation. Irritant. May

cause CNS depression. Prolonged

exposure may cause serious health damage

12. ECOLOGICAL INFORMATION

Ecotoxicity: Harmful in the environment.

Bioaccumulative potential:

Mobility:

No information found
No information found
Persistence and degradability:

No information found

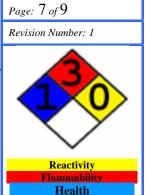
Other adverse effects: May cause long-term adverse effects.



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13. DISPOSAL CONSIDERATIONS

Disposal of product: Waste generators must consult state and

local hazardous waste regulations to ensure

complete and accurate classification.

Disposal of packaging: Vessels and containers can be reuse if not

damaged.

Vapors and air can form explosive

mixture.

14. TRANSPORT INFORMATION

ADR/RID:

Shipping name: Hexanes UN No. Land transport:

: 1208

Hazard class. : 3 Packing group: II

: 1208 UN No.

Shipping name : Hexanes

Hazard class. : 2.1 Packing group : II

ADR

Packaging group: II

Maritime transport: Shipping name : Hexanes

UN No. : 1208 Hazard class. : 3 Packing group: II

-23 C

RQ, HEXANES, 3, UN 1208, II Air transport:

Other information: The description above may not apply to all

shipping situations. Consult with

appropriate Dangerous Goods Regulations

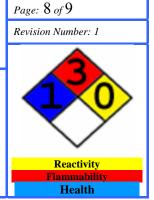
for additional information.



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15. REGULATORY INFORMATION

Hazardous label(s): Safety phrases:

Risk phrases:

S2 Keep out the reach children.

S9 Keep container in vitalized place.

S 16 Keep away from sources of ignition - No smoking.

S24 Avoid contact with skin.

S 29 Do not empty into drains.

S 33 Take precautionary measures against static discharges.

S36/37 Wear suitable protective clothing and gloves.

S51 Use only in well ventilated areas.

S 61 Avoid release to the environment. Refer to

special instructions /safety data sheets.

S62 If swallowed do not induce vomiting: seek medical attention immediately and show this container or label.

R11 Highly flammable

R20 Harmful by inhalation

R21 Harmful in contact with skin

R22 Harmful if swallowed

R38 Irritation to skin

R48 Danger of serious damage to health by

prolonged exposure

R 51/53 Toxic to aquatic organisms may cause long-term adverse effects in the aquatic environment.

R62 Possible risk to impaired fertility.

R 65 Harmful: may cause lung damage if

swallowed.

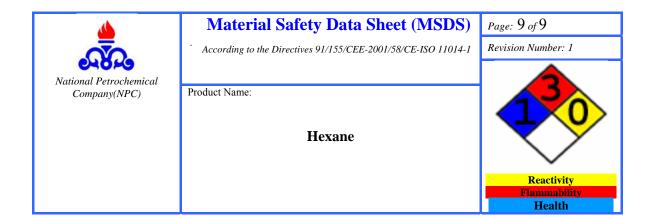
R 66 Repeated exposure may cause skin dryness or

cracking.

R 67 Vapors may cause drowsiness and dizziness

16. OTHER INFORMATION

None



The contents and format of this MSDS are in accordance with EEC Commission Directive 2001/58/EC

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