

Product Name: n-Pentane
Company: Bandar Imam Petrochemical Company-Faravaresh
Catalogue NO: S.P.1265.3
Unit: NF

Section 1: Identification

Product Name: Pentane		Other Name: Amyl hydride, n-pentane, Skellysolve A		<input type="checkbox"/> Flammability <input type="checkbox"/> Health <input type="checkbox"/> Instability <input type="checkbox"/> Special hazard	
Formula: C ₅ H ₁₂	CAS NO: 109-66-0	UN NO: 1265	Class: 3		
Identified Uses: Solvent.					
Telephone & Telefax: 0615225-2300 , 2311		Address Email : dmoffice@bipc.org.ir			
Emergency phone number: 2222-125-119 / 2242-115					

Section 2: Hazard(s) Identification

Classification of the substance or mixture: Flammable liquid, Aspiration hazard, Specific target organ toxicity - single exposure, Chronic aquatic toxicity.

Label elements Labelling (REGULATION (EC) No 1272/2008)	Hazard pictogram			
	Flammable	Harmful	Irritation	Harmful to environment

Hazard statements: Highly flammable liquid and vapour. May be fatal if swallowed and enters airways. May cause drowsiness or dizziness. Toxic to aquatic life with long lasting effects. Repeated exposure may cause skin dryness or cracking.

Precautionary statements

Prevention: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Avoid release to the environment.

Response: Rinse mouth. Do NOT induce vomiting.

Precautionary statements – storage: Store in a well-ventilated place. Keep container tightly closed.

Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers.

Other hazards: None known.

Section 3: Composition/Information on Ingredients

Substances:

Name	Formula	CAS NO	Concentration%	Classification
pentane	C ₅ H ₁₂	109-66-0	<= 100 %	Flammable liquid, Specific target organ toxicity - single exposure, Aspiration hazard, Chronic aquatic toxicity.

Mixture: Not applicable.

Section 4: First-Aid Measures

Description of first aid measures

After inhalation: fresh air. Call in physician.

Following skin contact : Take off immediately all contaminated clothing. Rinse skin with water/ shower.

After eye contact: rinse out with plenty of water. Remove contact lenses.

After swallowing: caution if victim vomits. Risk of aspiration! Keep airways free. Call a physician immediately. Pulmonary failure possible after aspiration of vomit. Do not give milk. No digestible oils.

Subsequently administer: activated charcoal (20 - 40 g in 10% slurry).

Most important symptoms and effects, both acute and delayed: irritant effects, respiratory arrest, narcosis, Convulsions. somnolence, Drowsiness, Repeated exposure may cause skin dryness or cracking.

Indication of any immediate medical attention and special treatment needed: No information available.

Section 5: Fire-Fighting Measures

Extinguishing Media

Suitable extinguishing media: Carbon dioxide (CO₂), Foam, Dry powder.

Unsuitable extinguishing media: For this substance/mixture no limitations of extinguishing agents are given.

Special hazards arising from the substance or mixture:

Combustible. Pay attention to flashback. Vapours are heavier than air and may spread along floors. Development of hazardous combustion gases or vapours possible in the event of fire. Forms explosive mixtures with air at ambient temperatures.

Advice for firefighters

Special protective equipment for firefighters: Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Further information: Remove container from danger zone and cool with water. Prevent fire extinguishing water from contaminating surface water or the ground water system.



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Section 6: Accidental Release Measures

Personal precautions ,protective equipment and emergency procedures for:

Advice for non-emergency personnel: Do not breathe vapours, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders: Protective equipment see section 8.

Environmental precautions: Do not let product enter drains. Risk of explosion.

Methods and materials for containment and cleaning up: Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

Reference to other sections: Indications about waste treatment see section 13.

Section 7: Handling and Storage

Precautions for safe handling

Advice on safe handling: Observe label precautions. Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

Advice on protection against fire and explosion: Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

Hygiene measures: Change contaminated clothing. Preventive skin protection recommended. Wash hands after working with substance.

Conditions for safe storage, including any incompatibilities

Storage conditions: Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition.

Recommended storage temperature see product label.

Specific end use(s): Apart from the uses mentioned in section 1 no other specific uses are stipulated.

Section 8: Exposure Controls/Personal Protection

Engineering measures: Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. See section 7.

Individual protection measures: Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

Eye/face protection : Safety glasses

Hand protection:

	Full contact	splash contact
Glove material	Nitrile rubber	Nitrile rubber
Glove thickness	0,40 mm	0,11 mm
Break through time	> 480 min	> 10 min

Other protective equipment: Flame retardant antistatic protective clothing.

Respiratory protection : required when vapours/aerosols are generated. The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Recommended Filter type: Filter AX (EN 371)

Environmental exposure controls : Do not let product enter drains. Risk of explosion.

Section 9: Physical and Chemical Properties

From: Liquid	Melting point/range: -130 °C	Density: 0,63 g/cm ³ at 20 °C	PH: No information available.
Color: colorless	Boiling point/range: 36 °C	Relative vapour density : 2.5	FLASH POINT: -48 °C
Odour: benzine-like	Vapour pressure: 570 hPa at 20 °C	Decomposition temperat: NA.	AUTOIGNITION TEMP: 285 °C
MW: 72 g/mol	Viscosity dynamic: NA.	Oxidizing properties: none	LEL (V/V %): 1,4 %(V)
Water solubility: 0,4 g/l at 16 °C	Explosive properties: Not classified as explosive.		UEL (V/V %): 8 %(V)

Section 10: Stability and Reactivity

Reactivity: Vapours may form explosive mixture with air.

Chemical stability: The product is chemically stable under standard ambient conditions (room temperature).

Possibility of hazardous reactions

Violent reactions possible with: Nitric acid, Strong oxidizing agents, halogens.

Conditions to avoid: Warming.

Incompatible materials: rubber, various plastics.

Hazardous decomposition products: CO ,CO₂.



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Section 11: Toxicological Information

Information on toxicological effects		Endpoint	Species	Exposure route	Value
OT:1000 PPM	TLV-TWA:1766 mg/m ³	LD50	Rat	-	-
IDLH: -	TLV-STEL: 2950 mg/m ³	LC50	Rat	inhalation	325 g/m ³ - 2h
Sensitisation: Reproductive toxicity		Carcinogenicity: This information is not available		Teratogenicity: This information is not available.	
Specific target organ toxicity - single exposure: May cause drowsiness or dizziness.					
Target Organs: Central nervous system.					
Specific target organ toxicity - repeated exposure: This information is not available.					
Target Organs: Central nervous system.					
Aspiration hazard : Aspiration hazard, Aspiration may cause pulmonary oedema and pneumonitis.					
Further information					
After uptake:Convulsions, respiratory arrest.					
Handle in accordance with good industrial hygiene and safety practice.					

Section 12: Ecological Information (non-mandatory)

Toxicity: static test LC50 Oncorhynchus mykiss (rainbow trout): 4,26 mg/l; 96 h Analytical monitoring: yes OECD Test Guideline 203
Persistence and degradability Biodegradability: Readily biodegradable.
Bioaccumulative potential: Bioaccumulation is not expected.
Mobility in soil: No information available.
Other adverse effects: Endangers drinking-water supplies if allowed to enter soil or water.

Section 13: Disposal Considerations (non-mandatory)

Sewage disposal-relevant information : Narrow the area. Stop leaks if possible. Remove all sources of heat and ignition. Control the vapors with water spray. Avoid contact with the material. If necessary, cover the cast material with foam. It absorbs the spilled material with neutral absorbent material. Send waste for burial or disposal. Rinse the area with water and detergents after collection.
Waste treatment of containers/packagings : See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

Section 14: Transport Information (non-mandatory)

Basic shipping description:	Labelling	
In accordance with TDG Transport hazard class(es) : Flammable Liquid.		
Proper shipping name: PENTANES	UN number: 1265	Class: 3
Packing group: II	Environmentally hazardous: yes	Special precautions for user : yes

Section 15: Regulatory Information

Safety , Health and Environmental regulations / legislation specific for the substance or mixture
EU regulations Major Accident Hazard: SEVESO III Legislation: ENVIRONMENTAL HAZARDS FLAMMABLE LIQUIDS
Regulation (EC) No 1005/2009 on substances that deplete the ozone layer: not regulated.
Substances of very high concern (SVHC): This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH).
National legislation Storage class:3
Chemical safety assessment: For this product a chemical safety assessment was not carried out.



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Section 16: Other information

Further information:

Full text of H-Statements referred to under sections 2 and 3.

H225: Highly flammable liquid and vapour.

H304: May be fatal if swallowed and enters airways.

H334: May cause drowsiness or dizziness.

H411: Toxic to aquatic life with long lasting effects.

Training advice

Provide adequate information, instruction and training for operators.

Hazard statements

H225 Highly flammable liquid and vapour.

H304 May be fatal if swallowed and enters airways.

H336 May cause drowsiness or dizziness.

H411 Toxic to aquatic life with long lasting effects.

EUH066 Repeated exposure may cause skin dryness or cracking.

Precautionary statements

Prevention

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P240 Ground/bond container and receiving equipment.

P273 Avoid release to the environment.

Response

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

Storage

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

Issue Date:2019.11.20

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Version: 1.1

Editors: HS&E Manager.

Reference:

according to Regulation (EC) No. 1907/2006

DISCLAIMER OF LIABILITY

The information contained herein is based on the present state of our knowledge. It characterises the product with regard to the appropriate safety precautions. It does not represent a guarantee of any properties of the product.