

SAFETY DATA SHEET

Honeywell**Pentane****158941-6X1L**

Version 1.1

Revision Date 07/26/2021

Print Date 05/11/2023

SECTION 1. IDENTIFICATION

Product name : Pentane

Number : 000000020211

Product Use Description : Laboratory chemicals

Manufacturer or supplier's details : Honeywell International Inc.
1953 South Harvey Street
Muskegon, MI 49442

For more information call : 1-800-368-0050
+1-231-726-3171 (Monday-Friday, 9:00am-5:00pm)

In case of emergency call : **Medical: 1-800-498-5701 or +1-303-389-1414**
Transportation (CHEMTREC): 1-800-424-9300 or +1-703-527-3887
:
(24 hours/day, 7 days/week)

SECTION 2. HAZARDS IDENTIFICATION**Emergency Overview**

Form : liquid

Color : colourless

Odor : characteristic

Classification of the substance or mixture

Classification of the substance or mixture : Flammable liquids, Category 2
Specific target organ toxicity - single exposure, Category 3,
Central nervous system
Aspiration hazard, Category 1

GHS Label elements, including precautionary statements

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Symbol(s) :   

Signal word : Danger

Hazard statements : Highly flammable liquid and vapour.
May be fatal if swallowed and enters airways.
May cause drowsiness or dizziness.

Precautionary statements : **Prevention:**
Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ ventilating/ lighting equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.

Response:
IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Call a POISON CENTER/ doctor if you feel unwell.
Do NOT induce vomiting.
In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

Storage:
Store in a well-ventilated place. Keep container tightly closed.
Keep cool.
Store locked up.

Disposal:
Dispose of contents/ container to an approved waste disposal plant.

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Carcinogenicity

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP, IARC, or OSHA.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTSFormula : C₅H₁₂

Chemical nature : Substance

Chemical name	CAS-No.	Concentration
Pentane	109-66-0	<=100.00 %

SECTION 4. FIRST AID MEASURES

- General advice : First aider needs to protect himself. Move out of dangerous area. Take off all contaminated clothing immediately. If unconscious, place in recovery position and seek medical advice.
- Inhalation : In case of accident by inhalation: remove casualty to fresh air and keep at rest. Consult a physician.
- Skin contact : After contact with skin, wash immediately with plenty of water. Call a physician if irritation develops or persists.
- Eye contact : Rinse thoroughly with plenty of water, also under the eyelids. Protect unharmed eye. Consult a physician.
- Ingestion : When swallowed, allow water to be drunk. Do NOT induce vomiting. Call a physician immediately.

Notes to physician

Most important symptoms/effects, acute and delayed : No information available.

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Indication of immediate medical attention and special treatment needed, if necessary : Treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Water spray
Foam
Carbon dioxide (CO₂)
Dry powder
- Unsuitable extinguishing media : Do not use a solid water stream as it may scatter and spread fire.
- Specific hazards during firefighting : Flammable.
Vapours may form explosive mixtures with air.
Vapours are heavier than air and may spread along floors.
Vapors may travel to areas away from work site before igniting/flashing back to vapor source.
- Special protective equipment for firefighters : Wear an approved positive pressure self-contained breathing apparatus in addition to standard fire fighting gear.
- Further information : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Evacuate personnel to safe areas.
Wear personal protective equipment. Unprotected persons must be kept away.
Ensure adequate ventilation.
Remove all sources of ignition.
- Environmental precautions : Do not flush into surface water or sanitary sewer system.
- Methods and materials for containment and cleaning : Ventilate the area.
Do not use sparking tools.

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up Use explosion-proof equipment.
Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).

SECTION 7. HANDLING AND STORAGE**Handling**

Precautions for safe handling : Wear personal protective equipment.
Use only in well-ventilated areas.

Advice on protection against fire and explosion : Keep product and empty container away from heat and sources of ignition.
No smoking.
Take precautionary measures against static discharges.
Vapours may form explosive mixtures with air.

Storage

Conditions for safe storage, including any incompatibilities : Store in area designed for storage of flammable liquids. Protect from physical damage.
Keep containers tightly closed in a dry, cool and well-ventilated place.
Store in original container.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Protective measures : Ensure that eyewash stations and safety showers are close to the workstation location.
Legal requirements are to be considered in regard of the selection, use and care of personal protective equipment.
Do not breathe vapours or spray mist.

Engineering measures : Use with local exhaust ventilation.
Prevent vapour buildup by providing adequate ventilation during and after use.

Eye protection : Safety glasses with side-shields

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Hand protection : Wear nitrile rubber gloves to avoid contact with the skin.
Gloves must be inspected prior to use.
Replace when worn.

Skin and body protection : Protective suit

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment.

Hygiene measures : Take off all contaminated clothing immediately.
Remove and wash contaminated clothing before re-use.
Wash hands before breaks and at the end of workday.
When using do not eat or drink.

Exposure Guidelines

Components	CAS-No.	Value	Control parameters	Update	Basis
Pentane	109-66-0	TWA : Time weighted average	(1,000 ppm)	02 2014	ACGIH:US. ACGIH Threshold Limit Values, as amended

Pentane	109-66-0	Ceil_Tim e : Ceiling Limit Value and Time Period (if specified) :	1,800 mg/m3 (610 ppm)	2005	NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards, as amended
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Pentane	109-66-0	REL : Recommended exposure limit (REL):	350 mg/m3 (120 ppm)	2005	NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards, as amended
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Pentane	109-66-0	PEL : Permissible exposure limit	2,950 mg/m3 (1,000 ppm)	02 2006	OSHA_TRANS:US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended
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Pentane	109-66-0	STEL : Short term exposure limit	2,250 mg/m3 (750 ppm)	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended
Pentane	109-66-0	TWA : Time weighted average	1,800 mg/m3 (600 ppm)	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended
Pentane	109-66-0	TWA : Time weighted average	(1,000 ppm)	02 2014	ACGIH:US. ACGIH Threshold Limit Values, as amended
Pentane	109-66-0	REL : Recomm ended exposure limit (REL):	350 mg/m3 (120 ppm)	2005	NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards, as amended
Pentane	109-66-0	Ceil_Tim e : Ceiling Limit Value and Time Period (if specified) :	1,800 mg/m3 (610 ppm)	2005	NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards, as amended
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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: liquid
Color	: colourless
Odor	: characteristic
Odor threshold	: Note: No data available
pH	: Note: Not applicable
Melting point/range	: -131 °C
Boiling point/boiling range	: 36 - 37 °C
Flash point	: -31 °F (-35 °C)
Evaporation rate	: Note: No data available
Lower explosion limit	: 1.4 %(V)
Upper explosion limit	: 8 %(V)

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Vapor pressure	: 1,599 hPa at 50 °C(122 °F) 684 hPa at 25 °C(77 °F)
Vapor density	: Note: No data available
Density	: 0.631 g/cm3 at 15 °C
Water solubility	: Note: insoluble
Partition coefficient: n-octanol/water	: Note: No data available
Ignition temperature	: 285 °C
Decomposition temperature	: Note: At normal pressure may be distilled without decomposition.
Viscosity, dynamic	: 0.25 mPa.s at 20 °C
Viscosity, kinematic	: Note: No data available
Molecular weight	: 72.15 g/mol

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: Not classified as a reactivity hazard.
Chemical stability	: Stable under recommended storage conditions.
Possibility of hazardous reactions	: Hazardous polymerisation does not occur.
Conditions to avoid	: Heat, flames and sparks.

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Incompatible materials	: Strong oxidizing agents
Hazardous decomposition products	: In case of fire hazardous decomposition products may be produced such as: Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).

SECTION 11. TOXICOLOGICAL INFORMATION

Acute oral toxicity	: LD50: > 2,000 mg/kg Species: Rat Method: OECD Test Guideline 401
Acute inhalation toxicity	: LC50: 364 mg/l Exposure time: 4 h Species: Rat
Acute dermal toxicity	: Note: No data available
Skin irritation	: Note: non-irritant
Eye irritation	: Note: non-irritant
Sensitisation	: Note: No data available
Repeated dose toxicity Pentane	: Species: Rat Application Route: Inhalation 90-day Inhalation Study No observed adverse effect level 20,000 mg/m3 Species: Rat Application Route: Inhalation

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Developmental Toxicity
No adverse response.
10,000 ppm

Genotoxicity in vitro : Note: No data available

Genotoxicity in vivo
Pentane : Species: Rat
Cell type: Micronucleus
Application Route: Inhalation
Result: negative

Carcinogenicity : Species: not specified
Note: No data available

Reproductive toxicity : Species: not specified
Note: No data available

Aspiration toxicity : May be fatal if swallowed and enters airways.

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity effects**

Toxicity to fish : Note: No data available

Toxicity to daphnia and other
aquatic invertebrates : EC50: 9.74 mg/l
Exposure time: 48 h
Species: Daphnia magna (Water flea)

Toxicity to algae : EC50: 1 mg/l
Exposure time: 8 h
Species: Algae

Further information on ecology

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Additional ecological
information : Toxic to aquatic life with long lasting effects.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods : Observe all Federal, State, and Local Environmental
regulations.

SECTION 14. TRANSPORT INFORMATION

DOT UN/ID No. : UN 1265
Proper shipping name : PENTANES
Class : 3
Packing group : II
Hazard Labels : 3

IATA UN/ID No. : UN 1265
Description of the goods : PENTANES
Class : 3
Packaging group : II
Hazard Labels : 3
Packing instruction (cargo
aircraft) : 364
Packing instruction : 353
(passenger aircraft)
Packing instruction : Y341
(passenger aircraft)

IMDG UN/ID No. : UN 1265
Description of the goods : PENTANES
Class : 3
Packaging group : II
Hazard Labels : 3
EmS Number : F-E, S-D
Marine pollutant : yes

SECTION 15. REGULATORY INFORMATION**Inventories**

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US. Toxic Substances Control Act	: On TSCA Inventory
Australia. Industrial Chemical (Notification and Assessment) Act	: On the inventory, or in compliance with the inventory
Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL)	: All components of this product are on the Canadian DSL
Japan. Kashin-Hou Law List	: On the inventory, or in compliance with the inventory
Korea. Existing Chemicals Inventory (KECI)	: On the inventory, or in compliance with the inventory
Philippines. Inventory of Chemicals and Chemical Substances (PICCS)	: On the inventory, or in compliance with the inventory
China. Inventory of Existing Chemical Substances (IECSC)	: On the inventory, or in compliance with the inventory
New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand	: On the inventory, or in compliance with the inventory

National regulatory information

SARA 302 Components	: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 313 Components	: 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.
SARA 311/312 Hazards	: Fire Hazard

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California Prop. 65	: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.	
Massachusetts RTK	: Pentane	109-66-0
New Jersey RTK	: Pentane	109-66-0
Pennsylvania RTK	: Pentane	109-66-0

SECTION 16. OTHER INFORMATION

	HMIS III	NFPA
Health hazard	: 1	1
Flammability	: 4	4
Physical Hazard	: 0	
Instability	:	0

Hazard rating and rating systems (e.g. HMIS® III, NFPA): This information is intended solely for the use of individuals trained in the particular system.

Further information

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. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Final determination of suitability of any material is the sole responsibility of the user. This information should not constitute a guarantee for any specific product properties.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

Previous Issue Date: 09/29/2016

Prepared by Honeywell Performance Materials and Technologies Product Stewardship Group