

Safety Data Sheet n-HEXANE

SDS no. F1URL7KH • Version 1.0 • Date of issue: 2023-10-16

SECTION 1: Identification

GHS Product identifier

Product name n-HEXANE

Other means of identification

Hexyl hydride,
n-Hexyl hydride,
n-Carproylhydride.
n-HEXANE AR HA017

Recommended use of the chemical and restrictions on use

Solvent, especially for vegetable oils; low-temperature thermometers; calibrations; polymerization reaction medium; paint diluent; alcohol denaturant; laboratory reagent.

Supplier's details

Name ChemSupply Australia Pty Ltd
Address 38-50 Bedford Street
5013 Gillman South Australia
Australia

Telephone 08 8440 2000
email www.chemsupply.com.au

Emergency phone number

CHEMCALL 1800 127 406 (Australia) / +64-4-917-9888 (International)

SECTION 2: Hazard identification

General hazard statement

Classified as dangerous goods according to the Australian Dangerous Goods Code (ADG).

Classified as Hazardous according to the Globally Harmonised System of classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia.

Dangerous goods of Class 3 (Flammable Liquid) are incompatible in a placard load with any of the following:

Class 1, Class 2.1, if both the Class 3 and Class 2.1 dangerous goods are in bulk, Class 2.3, Class 4.2, Class 5, Class 6, if the Class 3 dangerous goods are nitromethane, Class 7.

Classification of the substance or mixture

GHS classification in accordance with: UN GHS revision 7

- Flammable liquids, Cat. 2
- Aspiration hazard, Cat. 1
- Skin corrosion/irritation, Cat. 2
- Toxic to reproduction, Cat. 2
- Hazardous to the aquatic environment, long-term (chronic), Cat. 2
- Specific target organ toxicity following repeated exposure, Cat. 2
- Specific target organ toxicity following single exposure, Cat. 3

GHS label elements, including precautionary statements

Pictograms



Signal word

Danger

Hazard statement(s)

H225	Highly flammable liquid and vapor
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H336	May cause drowsiness or dizziness
H361	Suspected of damaging fertility or the unborn child
H373	May cause damage to organs through prolonged or repeated exposure
H411	Toxic to aquatic life with long lasting effects

Precautionary statement(s)

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof [electrical/ventilating/lighting/...] equipment.
P242	Use non-sparking tools.
P243	Take action to prevent static discharges.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor/physician
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312	Call a POISON CENTER/doctor/physician if you feel unwell.
P331	Do NOT induce vomiting.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P370+P378	In case of fire: Use agents recommended in Section 5 of SDS for extinction
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P403+P235	Store in a well-ventilated place. Keep cool.
P501	Dispose of contents/container to an approved waste disposal facility

SECTION 3: Composition/information on ingredients

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Mixtures

Molecular weight: 86.18

Components

Component	CAS no.	Concentration
N-HEXANE (EC no.: 203-777-6; Index no.: 601-037-00-0)	110-54-3	95 - 100 % (weight)
CLASSIFICATIONS: Flammable liquids, Cat. 2; Toxic to reproduction, Cat. 2; Aspiration hazard, Cat. 1; Specific target organ toxicity following single exposure, Cat. 3; Specific target organ toxicity following repeated exposure, Cat. 2; Skin corrosion/irritation, Cat. 2; Hazardous to the aquatic environment, long-term (chronic), Cat. 2. HAZARDS: H225 - Highly flammable liquid and vapor; H304 - May be fatal if swallowed and enters airways; H315 - Causes skin irritation; H336 - May cause drowsiness or dizziness; H361f - ; H373 - May cause damage to organs [organs] through prolonged or repeated exposure [route]; H411 - Toxic to aquatic life with long lasting effects. [SCLs/M-factors/ATEs]: STOT RE 2; H373: C ≥ 5 %		

SECTION 4: First-aid measures

Description of necessary first-aid measures

General advice	First Aid Facilities: Maintain eyewash fountain in work area.
If inhaled	If inhaled, remove from contaminated area to fresh air immediately. Apply artificial respiration if not breathing. If breathing is difficult, give oxygen. Consult a physician.
In case of skin contact	Immediately remove contaminated clothing and wash affected area with water for at least 15 minutes. Ensure contaminated clothing is washed before re-use. Seek medical advice /attention depending on the severity.
In case of eye contact	Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. In all cases of eye contamination it is a sensible precaution to seek medical advice.
If swallowed	Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. DO NOT INDUCE VOMITING. Seek immediate medical advice.

Most important symptoms/effects, acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

Indication of immediate medical attention and special treatment needed, if necessary

For advice, contact the National Poisons Information Centre (Phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor at once.

SECTION 5: Fire-fighting measures

Suitable extinguishing media

Caution: Use of water spray when fighting fire may be inefficient.

Small fire: Use foam, dry chemical, CO₂ or water spray.

Large fire: Use foam, fog or water spray - Do NOT use water jets.

If safe to do so, move undamaged containers from the fire area. Cool containers with flooding quantities of water until well after the fire is out. Avoid getting water inside the containers.

Specific hazards arising from the chemical

HIGHLY FLAMMABLE: These products have a low flash point. Will be easily ignited by heat, sparks or flames. Vapours will form explosive mixtures with air. Vapours will travel to source of ignition and flash back. Most vapours are heavier than air and will collect in low or confined areas (drains, basements, tanks). Many liquids are lighter than water. Containers may explode when heated. Fire will produce irritating, poisonous and/or corrosive gases. Vapours from run-off may create an explosion hazard.

Special protective actions for fire-fighters

SCBA and structural firefighter's uniform may provide limited protection. Fully encapsulating, gas-tight suits should be worn for maximum protection.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Evacuate the area of all non-essential personnel. Remove ignition sources Avoid inhalation, contact with skin, eyes and clothing.

Wear protective clothing specified for normal operations (see Section 8)

Absorb or contain liquid with sand, earth or spill control material. Shovel up using non sparking tools and place in a labelled, sealable container for subsequent safe disposal. Put leaking containers in a labelled drum or overdrum.

Seek expert advice on handling and disposal.

Prevent from entering into drains, ditches, rivers or the sea.

Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks or flame) within at least 50m. All equipment in handling this product must be earthed. Do NOT touch or walk through this product. Stop leak if safe to do so. Prevent entry into waterways, drains, confined areas.

Vapour suppressing foam may be used to control vapours. Water spray may be used to knock down or divert vapours.

Absorb spill with earth, sand or other non-combustible material. Use clean, non-sparking tools to collect material and place it in loosely-covered metal or plastic containers for later disposal.

SEEK EXPERT ADVICE ON HANDLING AND DISPOSAL.

SECTION 7: Handling and storage

Precautions for safe handling

Take precautionary measures against static discharges. Earth all equipment Avoid exposure - obtain special instructions before use

Conditions for safe storage, including any incompatibilities

Store in cool place and out of direct sunlight. Store in well ventilated area. Store away from oxidizing agents. Keep containers closed at all times. Store away from sources of heat or ignition.

SECTION 8: Exposure controls/personal protection

Appropriate engineering controls

Provide sufficient ventilation to ensure that the working environment is below the TWA (time weighted average). Where vapours or mists are generated, particularly in enclosed areas, and natural ventilation is inadequate, a flame proof exhaust ventilation system is required. Refer to AS 1940-The storage and handling of flammable and combustible liquids and AS 2430-Explosive gas atmospheres for further information concerning ventilation requirements.

Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.

Skin protection

Hand protection should comply with AS 2161 Industrial Safety Gloves and Mittens (Excluding Electrical and Medical Gloves).

Body protection

Foot protection should comply with AS 2210 Safety Footwear.

Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.

Respiratory protection

If engineering controls are not effective in controlling airborne exposure then an approved respirator with a replaceable vapor/ mist filter should be used. Refer to relevant regulations for further information concerning respiratory protective requirements. Reference should be made to Australian Standards AS/ NZS 1715, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices, in order to make any necessary changes for individual circumstances.

SECTION 9: Physical and chemical properties

Basic physical and chemical properties

Physical state	Liquid
Appearance	Colourless, volatile liquid.
Color	No data available.
Odor	Faint odour.
Odor threshold	No data available.
Melting point/freezing point	-95 °C
Boiling point or initial boiling point and boiling range	68.74 °C
Flammability	Flammable Liquid. Keep away from heat, sparks or naked flames. Use flameproof equipment and fittings to prevent flammability risk. Electrically link and ground metal containers for transfer of the product to prevent accumulation of static electricity. Ens
Lower and upper explosion limit/flammability limit	Flammable Limits - Lower: 1.0 Vol% Flammable Limits - Upper: 8.1 Vol%
Flash point	-22.7 °C (C.C.)
Explosive properties	Above flash point, vapour-air mixtures are explosive within flammable limits. Contact with oxidizing materials may cause extremely violent combustion. Explodes when mixed @ 28 °C with dinitrogen tetraoxide. Sensitive to static discharge.
Auto-ignition temperature	260 °C
Decomposition temperature	No data available.
Oxidizing properties	No data available.
pH	No data available.
Kinematic viscosity	No data available.
Solubility	Solubility in Water: Insoluble.Solubility in Organic Solvents: Soluble in alcohol, acetone, and ether.
Partition coefficient n-octanol/water (log value)	4.11 log Pow
Vapor pressure	160 hPa (20 °C)
Evaporation rate	No data available.
Density and/or relative density	Specific Gravity: 0.66
Relative vapor density	No data available.
Particle characteristics	No data available.

Supplemental information regarding physical hazard classes

No data available.

Further safety characteristics (supplemental)

No data available.

SECTION 10: Stability and reactivity

Reactivity

Stable under normal conditions of storage and handling.

Risk of ignition. Vapours may form explosive mixtures with air

Chemical stability

Stable under ordinary conditions of use and storage. Heat will contribute to instability.

Possibility of hazardous reactions

Hazardous Polymerization: Will not occur.

Conditions to avoid

Heat, flames and sparks.

Incompatible materials

Strong oxidisers.

Hazardous decomposition products

Oxides of carbon.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

Acute Toxicity - Oral: LD50 (Rat): 25000 mg/kg

Acute Toxicity - Inhalation: LC50 (Rat) 171.6mg/kg

Ingestion: May produce abdominal pain and nausea. Aspiration into lungs can produce severe lung damage.

Inhalation: Harmful by inhalation. Inhalation of vapours irritates the respiratory tract. Overexposure may cause lightheadedness, nausea, headache, and blurred vision. Greater exposure may cause muscle weakness, numbness of the extremities, unconsciousness and death.

Skin corrosion/irritation

Acute Toxicity - Dermal: LD50 (Rabbit): >2000 mg/kg

May cause redness, irritation, with dryness, cracking.

Serious eye damage/irritation

Vapours may cause irritation. Splashes may cause redness and pain.

Respiratory or skin sensitization

No data available.

Germ cell mutagenicity

No data available.

Carcinogenicity

No data available.

Reproductive toxicity

Animal experiments suggest that the substance may lead to an impairment of reproductive performance also in man.

Summary of evaluation of the CMR properties

No data available.

Specific target organ toxicity (STOT) - single exposure

May cause drowsiness or dizziness

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Specific target organ toxicity (STOT) - repeated exposure

May cause damage to organs through prolonged or repeated exposure

Aspiration hazard

May be fatal if swallowed and enters airways.

Additional information

Chronic Effects: Repeated or prolonged skin contact may defat the skin and produce irritation and dermatitis. Chronic inhalation may cause peripheral nerve disorders and central nervous system effects.

SECTION 12: Ecological information

Toxicity

Acute Toxicity - Daphnia: EC50 2.5 - 117 mg/l/96hr

SECTION 13: Disposal considerations

Disposal methods

Product disposal

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers.

Packaging disposal

Handle contaminated packaging as hazardous waste in the same way of the substance itself.

Other disposal recommendations

Do not discharge this material into waterways, drains and sewers.

SECTION 14: Transport information

ADG (Road and Rail)

UN Number: 1208

Class: 3

Packing Group: II

Proper Shipping Name: HEXANES

Hazchem emergency action code (EAC)

3[Y]E

IMDG

UN Number: 1208

Class: 3

Packing Group: II

EMS Number:

Proper Shipping Name: HEXANES

IATA

UN Number: 1208

Class: 3

Packing Group: II

Proper Shipping Name: HEXANES

SECTION 15: Regulatory information

Safety, health and environmental regulations specific for the product in question

Australia SUSMP

Poison Schedule: S5

SECTION 16: Other information

Further information/disclaimer

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Preparation information

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Standard for the Uniform Scheduling of Medicines and Poisons, Commonwealth of Australia

National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.'

Safe Work Australia, 'National Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals', July 2020.

Safe Work Australia, 'National Guide for Classifying Hazardous Chemicals', July 2020.

Safe Work Australia, Workplace Exposure Standards for Airborne Contaminants, December 2019

Safe Work Australia, Hazardous Chemical Information System (HCIS), hcis.safeworkaustralia.gov.au

IATA, Dangerous Goods Regulations (DGR)

IMO, International Maritime Dangerous Goods Code (IMDG)