

### MATERIAL SAFETY DATA SHEET (MSDS)

#### SECTION 1: Identification of the substance/mixture and of the company/undertaking

##### 1.1. Product identifier

Product form	: Substance
	:
EC Index-No.	: 601-037-00-0
EC-No.	: 203-777-6
CAS-No.	: 110-54-3
Product code	: 00161
Formula	: C6H14
Synonyms	: Hexane, Hexyl Hydride

##### 1.2. Relevant identified uses of the substance or mixture and uses advised against

###### 1.2.1. Relevant identified uses

Industrial/Professional use spec	: Industrial For professional use only
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###### 1.2.2. Uses advised against

No additional information available

##### 1.3. Details of the supplier of the safety data sheet

SPAN LAB  
UNIT NO. 14, SKY INDUSTRIAL ESTATE, WALIV, VASAI (E)  
401208 Mumbai - INDIA  
PH: +91 9820509929  
[info@spanlab.in](mailto:info@spanlab.in) [www.spanlab.in](http://www.spanlab.in)

#### SECTION 2: Hazards identification

##### 2.1. Classification of the substance or mixture

###### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flammable liquids, Category 2	H225
Skin corrosion/irritation, Category 2	H315
Reproductive toxicity, Category 2	H361f
Specific target organ toxicity — Single exposure, Category 3, Narcosis	H336
Specific target organ toxicity — Repeated exposure, Category 2	H373
Aspiration hazard,	H304

# n-HEXANE FOR SYNTHESIS

## Safety Data Sheet

Category 1

Hazardous to the aquatic environment — Chronic Hazard, Category 2

Full text of H statements : see section 16

### Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Repr.Cat.3; R62

F; R11

Xn; R65

Xn; R48/20

Xi; R38

N; R51/53

R67

Full text of R-phrases: see section 16

### Adverse physicochemical, human health and environmental effects

No additional information available

## 2.2. Label elements

### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS02



GHS07



GHS08



GHS09

Signal word (CLP) :

Danger

Hazard statements (CLP) :

H225 - Highly flammable liquid and vapour.  
H304 - May be fatal if swallowed and enters airways.  
H315 - Causes skin irritation.  
H336 - May cause drowsiness or dizziness.  
H361f - Suspected of damaging fertility.  
H373 - May cause damage to organs through prolonged or repeated exposure.  
H411 - Toxic to aquatic life with long lasting effects.

Precautionary statements (CLP) :

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.  
P273 - Avoid release to the environment.  
P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER/doctor  
P331 - Do NOT induce vomiting.

## 2.3. Other hazards

No additional information available

# n-HEXANE FOR SYNTHESIS

## Safety Data Sheet

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Name	: n-HEXANE FOR SYNTHESIS
CAS-No.	: 110-54-3
EC-No.	: 203-777-6
EC Index-No.	: 601-037-00-0

Full text of R- and H-statements: see section 16

#### 3.2. Mixtures

Not applicable

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

First-aid measures general	: IF exposed or concerned: Get medical advice/attention.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
First-aid measures after skin contact	: Rinse skin with water/shower. Take off immediately all contaminated clothing. Wash with plenty of water/.... Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention. Specific treatment (see supplemental first aid instruction on this label).
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.
First-aid measures after ingestion	: Immediately call a POISON CENTER/doctor.

#### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects	: Suspected of damaging fertility. Causes damage to organs.
Symptoms/effects after inhalation	: May cause respiratory irritation. May cause drowsiness or dizziness.
Symptoms/effects after skin contact	: Causes skin irritation.
Symptoms/effects after ingestion	: May be fatal if swallowed and enters airways.

#### 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

Suitable extinguishing media	: Water spray. Foam. Dry powder. Carbon dioxide.
Unsuitable extinguishing media	: Do not use a heavy water stream.

#### 5.2. Special hazards arising from the substance or mixture

Fire hazard	: Highly flammable liquid and vapour.
Explosion hazard	: May form flammable/explosive vapour-air mixture.

#### 5.3. Advice for firefighters

Protection during firefighting	: Do not attempt to take action without suitable protective equipment.
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### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking.
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# n-HEXANE FOR SYNTHESIS

## Safety Data Sheet

### 6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

### 6.1.2. For emergency responders

Protective equipment : Use personal protective equipment as required.

Emergency procedures : Ventilate area.

### 6.2. Environmental precautions

Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Collect spillage. On land, sweep or shovel into suitable containers.

### 6.4. Reference to other sections

No additional information available

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapours are flammable.

Precautions for safe handling : No open flames. No smoking. Use only non-sparking tools. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing dust/fume/gas/mist/vapours/spray. Use only outdoors or in a well-ventilated area.

Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment.

Storage conditions : Keep in fireproof place. Keep container tightly closed.

Incompatible materials : Heat sources.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

No additional information available

### 8.2. Exposure controls

Hand protection WPProtective gloves

Eye protection : Chemical goggles or safety glasses

Skin and body protection : Wear suitable protective clothing

Respiratory protection : Wear respiratory protection.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state : Liquid

# n-HEXANE FOR SYNTHESIS

## Safety Data Sheet

Molecular mass	: 86.18 g/mol
Colour	: Clear Colorless.
Odour	: gasoline-like.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: -95 °C
Freezing point	: No data available
Boiling point	: 68 - 70 K
Flash point	: -23 °C
Auto-ignition temperature	: 225 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: Flammable Highly flammable liquid and vapour.
Vapour pressure	: 151 mm Hg at 25 deg C
Relative vapour density at 20 °C	: 2.97
Relative density	: No data available
Density	: 0.678 g/cm <sup>3</sup>
Solubility	: Water: Insoluble in water
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: 0.31 mPa·s 20 deg C
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: 0.011 - 0.075 vol %

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Highly flammable liquid and vapour. May form flammable/explosive vapour-air mixture.

### 10.3. Possibility of hazardous reactions

No additional information available

### 10.4. Conditions to avoid

Open flame. Direct sunlight. Overheating.

# n-HEXANE FOR SYNTHESIS

## Safety Data Sheet

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

May release flammable gases.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

Skin corrosion/irritation : Causes skin irritation.

Serious eye damage/irritation : Not classified

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Suspected of damaging fertility.

STOT-single exposure : May cause drowsiness or dizziness.

STOT-repeated exposure : May cause damage to organs through prolonged or repeated exposure.

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

#### n-HEXANE FOR SYNTHESIS (110-54-3)

Viscosity, kinematic	0.457 mm <sup>2</sup> /s
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## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - water : Toxic to aquatic life with long lasting effects.

### 12.2. Persistence and degradability

#### n-HEXANE FOR SYNTHESIS (110-54-3)

Persistence and degradability	May cause long-term adverse effects in the environment.
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### 12.3. Bioaccumulative potential

No additional information available

### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

No additional information available

# n-HEXANE FOR SYNTHESIS

## Safety Data Sheet

### 12.6. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

Additional information : Handle empty containers with care because residual vapours are flammable.

Ecology - waste materials : Hazardous waste due to toxicity.

## SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

### 14.1. UN number

UN-No. (ADR) : 1208

UN-No. (IMDG) : 1208

UN-No. (IATA) : 1208

UN-No. (ADN) : 1208

UN-No. (RID) : 1208

### 14.2. UN proper shipping name

Proper Shipping Name (ADR) : HEXANES

Proper Shipping Name (IMDG) : HEXANES

Proper Shipping Name (IATA) : Hexanes

Proper Shipping Name (ADN) : HEXANES

Proper Shipping Name (RID) : HEXANES

Transport document description (ADR) : UN 1208 HEXANES, 3, II, (D/E), ENVIRONMENTALLY HAZARDOUS

Transport document description (IMDG) : UN 1208 HEXANES, 3, II, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS

Transport document description (IATA) : UN 1208 Hexanes, 3, II, ENVIRONMENTALLY HAZARDOUS

Transport document description (ADN) : UN 1208 HEXANES, 3, II, ENVIRONMENTALLY HAZARDOUS

Transport document description (RID) : UN 1208 HEXANES, 3, II, ENVIRONMENTALLY HAZARDOUS

### 14.3. Transport hazard class(es)

#### ADR

Transport hazard class(es) (ADR) : 3

Danger labels (ADR) : 3



#### IMDG

Transport hazard class(es) (IMDG) : 3

Danger labels (IMDG) : 3



# n-HEXANE FOR SYNTHESIS

## Safety Data Sheet

### IATA

Transport hazard class(es) (IATA) : 3

Hazard labels (IATA) : 3



### ADN

Transport hazard class(es) (ADN) : 3

Danger labels (ADN) : 3



### RID

Transport hazard class(es) (RID) : 3

Danger labels (RID) : 3



### 14.4. Packing group

Packing group (ADR) : II

Packing group (IMDG) : II

Packing group (IATA) : II

Packing group (ADN) : II

Packing group (RID) : II

### 14.5. Environmental hazards

Dangerous for the environment : Yes

Marine pollutant : Yes

Other information : No supplementary information available

### 14.6. Special precautions for user

#### - Overland transport

Classification code (ADR) : F1

Limited quantities (ADR) : 1I

Excepted quantities (ADR) : E2

Packing instructions (ADR) : P001, IBC02, R001

Mixed packing provisions (ADR) : MP19

Portable tank and bulk container instructions (ADR) : T4

Portable tank and bulk container special provisions (ADR) : TP1

Tank code (ADR) : LGBF



# n-HEXANE FOR SYNTHESIS

## Safety Data Sheet

Vehicle for tank carriage : FL  
Transport category (ADR) : 2  
Special provisions for carriage - Operation (ADR) : S2, S20  
Hazard identification number (Kemler No.) : 33  
Orange plates :



Tunnel restriction code (ADR) : D/E  
EAC code : 3YE

### - Transport by sea

Limited quantities (IMDG) : 1 L  
Excepted quantities (IMDG) : E2  
Packing instructions (IMDG) : P001  
IBC packing instructions (IMDG) : IBC02  
Tank instructions (IMDG) : T4  
Tank special provisions (IMDG) : TP1  
EmS-No. (Fire) : F-E  
EmS-No. (Spillage) : S-D  
Stowage category (IMDG) : E  
Properties and observations (IMDG) : Colourless, volatile liquids with a faint odour. Explosive limits: 1.1% to 7.5% n-HEXANE: flashpoint -22°C c.c. boiling point 69°C. NEOHEXANE: flashpoint -48°C c.c. boiling point 50°C. Immiscible with water. Slightly irritating to skin, eyes and mucous membranes.  
MFAG-No : 128

### - Air transport

PCA Excepted quantities (IATA) : E2  
PCA Limited quantities (IATA) : Y341  
PCA limited quantity max net quantity (IATA) : 1L  
PCA packing instructions (IATA) : 353  
PCA max net quantity (IATA) : 5L  
CAO packing instructions (IATA) : 364  
CAO max net quantity (IATA) : 60L  
ERG code (IATA) : 3H

### - Inland waterway transport

Classification code (ADN) : F1  
Limited quantities (ADN) : 1 L  
Excepted quantities (ADN) : E2  
Carriage permitted (ADN) : T  
Equipment required (ADN) : PP, EX, A  
Ventilation (ADN) : VE01  
Number of blue cones/lights (ADN) : 1

### - Rail transport

Classification code (RID) : F1  
Limited quantities (RID) : 1L  
Excepted quantities (RID) : E2  
Packing instructions (RID) : P001, IBC02, R001  
Mixed packing provisions (RID) : MP19  
Portable tank and bulk container instructions (RID) : T4

# n-HEXANE FOR SYNTHESIS

## Safety Data Sheet

Portable tank and bulk container special provisions (RID)	: TP1
Tank codes for RID tanks (RID)	: LGBF
Transport category (RID)	: 2
Colis express (express parcels) (RID)	: CE7
Hazard identification number (RID)	: 33

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### 15.1.1. EU-Regulations

No REACH Annex XVII restrictions

n-HEXANE FOR SYNTHESIS is not on the REACH Candidate List

n-HEXANE FOR SYNTHESIS is not on the REACH Annex XIV List

#### 15.1.2. National regulations

##### Germany

Reference to AwSV : Water hazard class (WGK) 2, Significantly hazardous to water (Classification according to AwSV; ID No. 124)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

##### Netherlands

SZW-lijst van kankerverwekkende stoffen : n-HEXANE FOR SYNTHESIS is listed

SZW-lijst van mutagene stoffen : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : n-HEXANE FOR SYNTHESIS is listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : The substance is not listed

##### Denmark

Class for fire hazard : Class I-1

Store unit : 1 liter

Classification remarks : F+ <Flam. Liq. 2>; Emergency management guidelines for the storage of flammable liquids must be followed

Recommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product  
Pregnant/breastfeeding women working with the product must not be in direct contact with the product

The requirements from the Danish Working Environment Authorities regarding work with carcinogens must be followed during use and disposal

# n-HEXANE FOR SYNTHESIS

## Safety Data Sheet

### 15.2. Chemical safety assessment

No additional information available

### SECTION 16: Other information

Full text of R-, H- and EUH-statements:

Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
Asp. Tox. 1	Aspiration hazard, Category 1
Flam. Liq. 2	Flammable liquids, Category 2
Repr. 2	Reproductive toxicity, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT RE 2	Specific target organ toxicity — Repeated exposure, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Narcosis
H225	Highly flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.
H361f	Suspected of damaging fertility.
H373	May cause damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.
R11	Highly flammable
R38	Irritating to skin
R48/20	Harmful: danger of serious damage to health by prolonged exposure through inhalation
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R62	Possible risk of impaired fertility
R65	Harmful: may cause lung damage if swallowed
R67	Vapours may cause drowsiness and dizziness
F	Highly flammable
N	Dangerous for the environment
Xi	Irritant
Xn	Harmful

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*