CAS-No.: 110-54-3 MSDS



## **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 : 00163
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

#### 1.2.2. Uses advised against

No additional information available

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

SPAN LAB

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info@spanlab.in 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, H225

Category 2

Aspiration hazard, H304

Category 1

Reproductive toxicity, H361f

Category 2

Skin corrosion/irritation, H315

Category 2

Specific target organ H335

toxicity — Single exposure, Category 3, Respiratory tract irritation

Specific target organ H373

toxicity — Repeated

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exposure, Category 2

Specific target organ

H336

toxicity — Single exposure, Category 3,

Narcosis

Hazardous to the aquatic H411

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

GHS08

GHS07

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.

H335 - May cause respiratory 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

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## **SECTION 3: Composition/information on ingredients**

#### 3.1. Substances

Name : n-HEXANE 95% FOR HPLC & UV SPECTROSCOPY

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. Get medical

advice/attention.

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 : Rinse mouth. 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.

#### **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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#### 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. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible.

#### 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, forearms and face thoroughly after handling.

#### 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 : Protective gloves

Eye protection : Chemical goggles or safety glasses

Skin and body protection : Wear suitable protective clothing

Respiratory protection : Approved supplied air respirator

#### **SECTION 9: Physical and chemical properties**

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

Physical state : Liquid

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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 °C

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 : 1.1 - 7.5 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.

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#### 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 respiratory irritation. 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 95% FOR HPLC & UV SPECTROSCOPY (110-54-3)

Viscosity, kinematic 0.457 mm²/s

#### **SECTION 12: Ecological information**

#### 12.1. Toxicity

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

#### 12.2. Persistence and degradability

#### n-HEXANE 95% FOR HPLC & UV SPECTROSCOPY (110-54-3)

Persistence and degradability May cause long-term adverse effects in the environment.

#### 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

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#### 12.6. Other adverse effects

No additional information available

#### **SECTION 13: Disposal considerations**

#### 13.1. Waste treatment methods

Product/Packaging disposal

recommendations

Additional information Ecology - waste materials : Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

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

: 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 : 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



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#### 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

: TP1

#### 14.6. Special precautions for user

## - Overland transport

Classification code (ADR) : F1
Limited quantities (ADR) : 11
Excepted quantities (ADR) : E2

Packing instructions (ADR) : P001, IBC02, R001

Mixed packing provisions (ADR) : MP19
Portable tank and bulk container : T4

instructions (ADR)

Portable tank and bulk container special

provisions (ADR)

Tank code (ADR) : LGBF

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Vehicle for tank carriage : FL Transport category (ADR) : 2 Special provisions for carriage - Operation : S2, S20

(ADR)

Hazard identification number (Kemler No.)

Orange plates

33 1208

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 : S-D EmS-No. (Spillage) : E Stowage category (IMDG)

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 : 1L (IATA)

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

: F1 Classification code (ADN) Limited quantities (ADN) : 1 L Excepted quantities (ADN) : E2 Carriage permitted (ADN) : T

: PP, EX, A Equipment required (ADN) : VE01 Ventilation (ADN) Number of blue cones/lights (ADN) : 1

#### - Rail transport

Classification code (RID) : F1 Limited quantities (RID) : 1L : E2 Excepted quantities (RID)

: P001, IBC02, R001 Packing instructions (RID)

Mixed packing provisions (RID) : MP19 Portable tank and bulk container : T4

instructions (RID)

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: TP1

## Safety Data Sheet

Portable tank and bulk container special

provisions (RID)

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 95% FOR HPLC & UV SPECTROSCOPY is not on the REACH Candidate List n-HEXANE 95% FOR HPLC & UV SPECTROSCOPY 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.BlmSchV

: Is not subject of the 12. BlmSchV (Hazardous Incident Ordinance)

Netherlands

SZW-lijst van kankerverwekkende stoffen : n-HEXANE 95% FOR HPLC & UV SPECTROSCOPY is listed

SZW-lijst van mutagene stoffen : The substance is not listed NIET-limitatieve lijst van voor de : The substance is not listed

voortplanting giftige stoffen – Borstvoeding

NIET-limitatieve lijst van voor de voortplanting giftige stoffen –

Vruchtbaarheid

NIET-limitatieve lijst van voor de

voortplanting giftige stoffen - Ontwikkeling

: n-HEXANE 95% FOR HPLC & UV SPECTROSCOPY is listed

t van voor de : The substance is not listed

Denmark

Classification remarks : 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

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#### 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, Respiratory tract irritation
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.
H335	May cause respiratory 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.

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