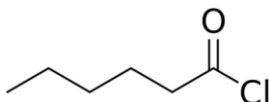


SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Substance
Trade name EC- : HEXANOYL CHLORIDE
No. : 205-549-1
CAS-No. : 142-61-0
Product code : 4054H
Formula : C₆H₁₁ClO
Chemical structure :



Synonyms : Caproyl chloride

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

1.2.1. Relevant identified uses

Use of the substance/mixture : Laboratory chemicals
Manufacture of substances

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 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 3 H226
Skin corrosion/irritation, Category 1, Sub-Category 1B H314
Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

Flammable liquid and vapour. Causes severe skin burns and eye damage.

2.2. Label elements

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

Hazard pictograms (CLP) :



GHS02

GHS05

Signal word (CLP) :

Danger

Hazard statements (CLP) :

H226 - Flammable liquid and vapour.
H314 - Causes severe skin burns and eye damage.

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Precautionary statements (CLP) : 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.
P280 - Wear protective gloves, protective clothing, eye protection, face protection.
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type : Mono-constituent

| Name | Product identifier | % |
|-------------------|--|-----|
| HEXANOYL CHLORIDE | CAS-No.: 142-61-0 EC-No.: 205-549-1 | 100 |

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Call a physician immediately.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Rinse skin with water/shower. Take off immediately all contaminated clothing. Call a physician immediately.
First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
First-aid measures after ingestion : Rinse mouth. Do not induce vomiting. Call a physician immediately.

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

Symptoms/effects after skin contact : Burns.
Symptoms/effects after eye contact : Serious damage to eyes.
Symptoms/effects after ingestion : Burns.

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. Dry powder. Foam. Carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Flammable liquid and vapour.
Hazardous decomposition products in case of fire : Toxic fumes may be released.

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5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. No open flames, no sparks, and no smoking. Avoid contact with skin and eyes. Do not breathe dust, fume, gas, mist, spray, vapours.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapours may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Avoid contact with skin and eyes. Do not breathe dust, fume, gas, mist, spray, vapours.

Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Ground/bond container and receiving equipment.

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

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

No additional information available

8.1.2 Recommended monitoring procedures

No additional information available

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1. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

8.2. Exposure controls

1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

1. Personal protection equipment

Personal protective equipment symbol(s):



1. Eye and face protection

Eye protection:

Chemical goggles or safety glasses. Safety glasses

8.2.2.2. Skin protection

Hand protection:

Protective gloves

8.2.2.3. Respiratory protection

Respiratory protection:

Wear appropriate mask

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|--|-------------------------------|
| Physical state | : Liquid |
| Appearance | : Clear liquid. |
| Molecular mass | : 134.61 g/mol |
| Colour | : Colourless to Light yellow. |
| Odour | : No data available |
| Odour threshold | : No data available |
| pH | : No data available |
| Relative evaporation rate (butylacetate=1) | : No data available |
| Melting point | : Not applicable |
| Freezing point | : -87 °C |
| Boiling point | : 150 – 153 °C |
| Flash point | : 50 °C |
| Auto-ignition temperature | : No data available |
| Decomposition temperature | : No data available |
| Flammability (solid, gas) | : Not applicable |
| Vapour pressure | : No data available |
| Relative vapour density at 20 °C | : No data available |

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| | | | |
|---|---------|------------|--|
| Relative density | Density | Solubility | : Ether: Miscible Organic solvent: Miscible in Chloroform : |
| Partition coefficient n-octanol/water (Log Pow) | | | No data available |
| Viscosity, kinematic | | | : No data available |
| Viscosity, dynamic | | | : No data available |
| Explosive properties | | | : No data available |
| Oxidising properties | | | : No data available |
| Explosive limits | | | : No data available |
| : No data available | | | |
| : 0.963 g/cm ³ | | | |

9.2. Other information

Refractive index : 1.425 – 1.427 (20°C, 589 nm)

SECTION 10: Stability and reactivity

10.1. Reactivity

Flammable liquid and vapour.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

| | |
|-----------------------------------|---------------------------------------|
| Acute toxicity (oral) | : Not classified |
| Acute toxicity (dermal) | : Not classified |
| Acute toxicity (inhalation) | : Not classified |
| Skin corrosion/irritation | : Causes severe skin burns. |
| Serious eye damage/irritation | : Assumed to cause serious eye damage |
| Respiratory or skin sensitisation | : Not classified |
| Germ cell mutagenicity | : Not classified |
| Carcinogenicity | : Not classified |
| Reproductive toxicity | : Not classified |
| STOT-single exposure | : Not classified |
| STOT-repeated exposure | : Not classified |
| Aspiration hazard | |

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Before neutralisation, the product may represent a danger to aquatic organisms.

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Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : Not classified

12.2. Persistence and degradability

No additional information available

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

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Additional information : Flammable vapours may accumulate in the container.

SECTION 14: Transport information

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

14.1 UN number

UN-No. (ADR) : UN 2920 :
UN-No. (IMDG) UN 2920 :
UN-No. (IATA) UN 2920 :
UN-No. (ADN) UN 2920 :
UN-No. (RID) UN 2920

14.2. UN proper shipping name

Proper Shipping Name (ADR) : CORROSIVE LIQUID, FLAMMABLE, N.O.S.
Proper Shipping Name (IMDG) : CORROSIVE LIQUID, FLAMMABLE, N.O.S.
Proper Shipping Name (IATA) : Corrosive liquid, flammable, n.o.s.
Proper Shipping Name (ADN) : CORROSIVE LIQUID, FLAMMABLE, N.O.S.
Proper Shipping Name (RID) : CORROSIVE LIQUID, FLAMMABLE, N.O.S.
Transport document description (ADR) : UN 2920 CORROSIVE LIQUID, FLAMMABLE, N.O.S. (HEXANOYL CHLORIDE), 8 (3), II, (D/E)
Transport document description (IMDG) : UN 2920 CORROSIVE LIQUID, FLAMMABLE, N.O.S. (HEXANOYL CHLORIDE), 8 (3), II :
Transport document description (IATA) : UN 2920 Corrosive liquid, flammable, n.o.s. (HEXANOYL CHLORIDE), 8 (3), II
Transport document description (ADN) : UN 2920 CORROSIVE LIQUID, FLAMMABLE, N.O.S. (HEXANOYL CHLORIDE), 8 (3), II :
Transport document description (RID) : UN 2920 CORROSIVE LIQUID, FLAMMABLE, N.O.S. (HEXANOYL CHLORIDE), 8 (3), II

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : 8 (3)
Danger labels (ADR) : 8, 3

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IMDG

Transport hazard class(es) (IMDG)

: 8 (3)

Danger labels (IMDG)

: 8, 3 :



IATA

Transport hazard class(es) (IATA)

: 8 (3)

Danger labels (IATA)

: 8, 3

:



ADN

Transport hazard class(es) (ADN)

: 8 (3)

Danger labels (ADN)

: 8, 3 :



RID

Transport hazard class(es) (RID)

: 8 (3)

Danger labels (RID)

: 8, 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

: No

Marine pollutant

: No

Other information

: No supplementary information available

14.6. Special precautions for user

Overland transport

Classification code (ADR)

: CF1

Special provisions (ADR)

: 274

Limited quantities (ADR)

: 1I

Excepted quantities (ADR)

: E2

Packing instructions (ADR)

: P001, IBC02

Mixed packing provisions (ADR)

: MP15

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Portable tank and bulk container instructions (ADR) : T11 Portable
tank and bulk container special provisions : TP2, TP27 (ADR)

Tank code (ADR) : L4BN
Vehicle for tank carriage : FL
Transport category (ADR) : 2
Special provisions for carriage - Operation (ADR) : S2
Hazard identification number (Kemler No.) : 83
Orange plates :



Tunnel restriction code (ADR) : D/E
EAC code : +3W
APP code : A(fl)

Transport by sea

Special provisions (IMDG) : 274
Limited quantities (IMDG) : 1 L
Excepted quantities (IMDG) : E2
Packing instructions (IMDG) : P001
IBC packing instructions (IMDG) : IBC02
Tank instructions (IMDG) : T11
Tank special provisions (IMDG) : TP2, TP27
EmS-No. (Fire) : F-E
EmS-No. (Spillage) : S-C
Stowage category (IMDG) : C
Stowage and handling (IMDG) : SW1, SW2
Properties and observations (IMDG) : Causes burns to skin, eyes and mucous membranes.

Air transport

PCA Excepted quantities (IATA) : E2
PCA Limited quantities (IATA) : Y840
PCA limited quantity max net quantity (IATA) : 0.5L
PCA packing instructions (IATA) : 851
PCA max net quantity (IATA) : 1L
CAO packing instructions (IATA) : 855
CAO max net quantity (IATA) : 30L
ERG code (IATA) : 8F

Inland waterway transport

Classification code (ADN) : CF1
Special provisions (ADN) : 274
Limited quantities (ADN) : 1 L
Excepted quantities (ADN) : E2
Carriage permitted (ADN) : T
Equipment required (ADN) : PP, EP, EX, A
Ventilation (ADN) : VE01
Number of blue cones/lights (ADN) : 1

Rail transport

Classification code (RID) : CF1
Special provisions (RID) : 274
Limited quantities (RID) : 1L
Excepted quantities (RID) : E2
Packing instructions (RID) : P001, IBC02
Mixed packing provisions (RID) : MP15
Portable tank and bulk container instructions (RID) : T11
Portable tank and bulk container special provisions (RID) : TP2, TP27
Tank codes for RID tanks (RID) : L4BN
Transport category (RID) : 2

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Colis express (express parcels) (RID) : CE6
Hazard identification number (RID) : 83

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

1. EU-Regulations

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)

| Reference code | Applicable on |
|----------------|-------------------|
| 3(a) | HEXANOYL CHLORIDE |
| 3(b) | HEXANOYL CHLORIDE |
| 40. | HEXANOYL CHLORIDE |

REACH Annex XIV (Authorisation List)

HEXANOYL CHLORIDE is not on the REACH Annex XIV List

REACH Candidate List (SVHC)

HEXANOYL CHLORIDE is not on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

HEXANOYL CHLORIDE is not subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

POP Regulation (Persistent Organic Pollutants)

HEXANOYL CHLORIDE is not subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

Ozone Regulation (1005/2009)

HEXANOYL CHLORIDE is not subject to REGULATION (EU) No 1005/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 September 2009 on substances that deplete the ozone layer.

Explosives Precursors Regulation (2019/1148)

Contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on drug precursors)

15.1.2. National regulations

Germany

Employment restrictions : Observe restrictions according Act on the Protection of Working Mothers (MuSchG).
Observe restrictions according Act on the Protection of Young People in Employment (JArbSchG).
Water hazard class (WGK) : WGK 1, Slightly hazardous to water (Classification according to AwSV; ID No. 2132).
Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

Netherlands

SZW-lijst van kankerverwekkende stoffen : The substance is not listed
SZW-lijst van mutagene stoffen : The substance is not listed
SZW-lijst van reprotoxische stoffen – Borstvoeding : The substance is not listed
SZW-lijst van reprotoxische stoffen – Vruchtbaarheid : The substance is not listed
SZW-lijst van reprotoxische stoffen – Ontwikkeling : The substance is not listed

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Denmark

Class for fire hazard Store : Class II-1
unit Classification remarks : 5 liter
Danish National Regulations : R10 <H226;H314>; Emergency management guidelines for the storage of flammable liquids must be followed
: Young people below the age of 18 years are not allowed to use the product

Switzerland

Storage class (LK) : LK 3 - Flammable liquids

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:

| | |
|--------|---|
| ADN | European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways |
| ADR | European Agreement concerning the International Carriage of Dangerous Goods by Road |
| ATE | Acute Toxicity Estimate |
| BCF | Bioconcentration factor |
| BLV | Biological limit value |
| BOD | Biochemical oxygen demand (BOD) |
| COD | Chemical oxygen demand (COD) |
| DMEL | Derived Minimal Effect level |
| DNEL | Derived-No Effect Level |
| EC-No. | European Community number |
| EC50 | Median effective concentration |
| EN | European Standard |
| IARC | International Agency for Research on Cancer |
| IATA | International Air Transport Association |
| IMDG | International Maritime Dangerous Goods |
| LC50 | Median lethal concentration |
| LD50 | Median lethal dose |
| LOAEL | Lowest Observed Adverse Effect Level |
| NOAEC | No-Observed Adverse Effect Concentration |
| NOAEL | No-Observed Adverse Effect Level |
| NOEC | No-Observed Effect Concentration |
| OECD | Organisation for Economic Co-operation and Development |
| OEL | Occupational Exposure Limit |
| PBT | Persistent Bioaccumulative Toxic |
| PNEC | Predicted No-Effect Concentration |
| RID | Regulations concerning the International Carriage of Dangerous Goods by Rail |
| SDS | Safety Data Sheet |
| STP | Sewage treatment plant |

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Abbreviations and acronyms:

| | |
|---------|--|
| ThOD | Theoretical oxygen demand (ThOD) |
| TLM | Median Tolerance Limit |
| VOC | Volatile Organic Compounds |
| CAS-No. | Chemical Abstract Service number |
| N.O.S. | Not Otherwise Specified |
| vPvB | Very Persistent and Very Bioaccumulative |
| ED | Endocrine disrupting properties |

Full text of H- and EUH-statements:

| | |
|---------------|--|
| Flam. Liq. 3 | Flammable liquids, Category 3 |
| H226 | Flammable liquid and vapour. |
| H314 | Causes severe skin burns and eye damage. |
| Skin Corr. 1B | Skin corrosion/irritation, Category 1, Sub-Category 1B |

Safety Data Sheet (SDS), EU

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.