

1 Identification

- **Product identifier**
- **Product Name:** Hexadecane
- **Part Number:** S-2175
- **Application of the substance / the mixture** Certified Reference Material
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
SPEX CertiPrep, LLC.
203 Norcross Ave, Metuchen,
NJ 08840 USA
- **Information department:** product safety department
- **Emergency telephone number:**
Emergency Phone Number (24 hours)
CHEMTREC (800-424-9300)
Outside US: 703-527-3887

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

Flam. Liq. 2 H225 Highly flammable liquid and vapor.



GHS08 Health hazard

Carc. 2 H351 Suspected of causing cancer.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

- **Label elements**

- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS02



GHS07



GHS08

- **Signal word** Danger

- **Hazard-determining components of labeling:**

dichloromethane

- **Hazard statements**

H225 Highly flammable liquid and vapor.

H302 Harmful if swallowed.

H351 Suspected of causing cancer.

- **Precautionary statements**

Keep away from heat/sparks/open flames/hot surfaces. No smoking.

Use explosion-proof electrical/ventilating/lighting/equipment.

Wear protective gloves / eye protection / face protection.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Classification system:**

- **NFPA ratings (scale 0 - 4)**



Health = 1

Fire = 3

Reactivity = 0

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· HMIS-ratings (scale 0 - 4)

| | | |
|------------|---|----------------|
| HEALTH | 1 | Health = *1 |
| FIRE | 3 | Fire = 3 |
| REACTIVITY | 0 | Reactivity = 0 |

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

· Dangerous components:

| | | |
|---|-----------------|-------|
| 75-09-2 | dichloromethane | 99.9% |
| · Chemical identification of the substance/preparation | | |
| 544-76-3 | Cetane | 0.1% |

4 First-aid measures

- **Description of first aid measures**
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for Doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** CO₂, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.

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- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep receptacle tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**

- **Components with limit values that require monitoring at the workplace:**

75-09-2 dichloromethane

| | |
|-----|--|
| PEL | Short-term value: 125 ppm Long-term value: 25 ppm see 29 CFR 1910.1052 |
| REL | See Pocket Guide App. A |
| TLV | Long-term value: 174 mg/m ³ , 50 ppm BEI |

- **Ingredients with biological limit values:**

75-09-2 dichloromethane

| | |
|-----|---|
| BEI | 0.3 mg/L Medium: urine Time: end of shift Parameter: Dichloromethane (semi-quantitative) |
|-----|---|

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
- **Breathing equipment:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**



Tightly sealed goggles

US

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9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

· **Form:** Liquid
· **Color:** According to product specification

· **Odor:** Characteristic

· **Odour Threshold:** Not applicable.

· **pH-value:** Not applicable.

· **Change in condition**

· **Melting point/Melting range:** Undetermined.

· **Boiling point/Boiling range:** 40 °C (104 °F)

· **Flash point:** -14 °C (7 °F)

· **Flammability (solid, gaseous):** Not applicable.

· **Ignition temperature:** 605 °C (1121 °F)

· **Decomposition temperature:** Not applicable.

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

· **Explosion limits:**

· **Lower:** 13.0 Vol %

· **Upper:** 22.0 Vol %

· **Vapor pressure at 20 °C (68 °F):** 453 hPa (340 mm Hg)

· **Density at 20 °C (68 °F)** 1.32944 g/cm³ (11.094 lbs/gal)

· **Relative density** Not applicable.

· **Vapor density** Not applicable.

· **Evaporation rate** Not applicable.

· **Solubility in / Miscibility with**

· **Water:** Not miscible or difficult to mix.

· **Partition coefficient (n-octanol/water):** Not applicable.

· **Viscosity:**

· **Dynamic:** Not applicable.

· **Kinematic:** Not applicable.

· **Solvent content:**

· **Organic solvents:** 99.9 %

· **Other information** No further relevant information available.

10 Stability and reactivity

· **Reactivity** No further relevant information available.

· **Chemical stability**

· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

· **Possibility of hazardous reactions** No dangerous reactions known.

· **Conditions to avoid** No further relevant information available.

· **Incompatible materials:** No further relevant information available.

· **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

· **Information on toxicological effects**

· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

75-09-2 dichloromethane

| | | |
|------|------|------------------|
| Oral | LD50 | 1600 mg/kg (rat) |
|------|------|------------------|

| | | |
|------------|----------|---------------|
| Inhalative | LC50/4 h | 88 mg/l (rat) |
|------------|----------|---------------|

· **Primary irritant effect:**

· **on the skin:** No irritant effect.

· **on the eye:** No irritating effect.

· **Sensitization:** No sensitizing effects known.

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· **Additional toxicological information:** The product shows the following dangers according to internally approved calculation methods for preparations:

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

75-09-2 dichloromethane

2B

· **NTP (National Toxicology Program)**

75-09-2 dichloromethane

R

· **OSHA-Ca (Occupational Safety & Health Administration)**

75-09-2 dichloromethane

12 Ecological information

· **Toxicity**

· **Aquatic toxicity:** No further relevant information available.

· **Persistence and degradability** No further relevant information available.

· **Behavior in environmental systems:**

· **Bioaccumulative potential** No further relevant information available.

· **Mobility in soil** No further relevant information available.

· **Additional ecological information:**

· **General notes:**

Water hazard class 2 (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**

· **Recommendation:** Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**

· **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· **UN-Number**

· **DOT, ADR, IMDG, IATA**

UN1593

· **UN proper shipping name**

· **DOT**

Dichloromethane

· **ADR**

1593 Dichloromethane

· **IMDG, IATA**

DICHLOROMETHANE

· **Transport hazard class(es)**

· **DOT**



· **Class**

6.1 Toxic substances

· **Label**

6.1

· **ADR, IMDG, IATA**



· **Class**

6.1 Toxic substances

· **Label**

6.1

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| | |
|--|--|
| · Packing group · DOT, ADR, IMDG, IATA | III |
| · Environmental hazards: | Not applicable. |
| · Special precautions for user · Danger code (Kemler): · EMS Number: · Segregation groups · Stowage Category | Warning: Toxic substances 60 F-A,S-A Liquid halogenated hydrocarbons A |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| · Transport/Additional information: | |
| · ADR · Excepted quantities (EQ) | Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml |
| · IMDG · Limited quantities (LQ) | 5L |
| · UN "Model Regulation": | UN 1593 DICHLOROMETHANE, 6.1, III |

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara

| | | |
|--|------------------------------------|-------------------------|
| · Section 355 (extremely hazardous substances): | None of the ingredients is listed. | |
| · Section 313 (Specific toxic chemical listings): | 75-09-2 dichloromethane | |
| · TSCA (Toxic Substances Control Act): | All ingredients are listed. | |
| · Proposition 65 | | |
| · Chemicals known to cause cancer: | 75-09-2 dichloromethane | |
| · Chemicals known to cause reproductive toxicity for females: | None of the ingredients is listed. | |
| · Chemicals known to cause reproductive toxicity for males: | None of the ingredients is listed. | |
| · Chemicals known to cause developmental toxicity: | None of the ingredients is listed. | |
| · Carcinogenic categories | | |
| · EPA (Environmental Protection Agency) | 75-09-2 dichloromethane | L |
| · TLV (Threshold Limit Value established by ACGIH) | 75-09-2 dichloromethane | A3 |
| · NIOSH-Ca (National Institute for Occupational Safety and Health) | 75-09-2 dichloromethane | |
| · Protective Action Criteria for Chemicals | | |
| · PAC-1: | 75-09-2 dichloromethane | 200 ppm |
| | 544-76-3 Cetane | 35 mg/m ³ |
| · PAC-2: | 75-09-2 dichloromethane | 560 ppm |
| | 544-76-3 Cetane | 380 mg/m ³ |
| · PAC-3: | 75-09-2 dichloromethane | 6,900 ppm |
| | 544-76-3 Cetane | 2,800 mg/m ³ |

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· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS02

GHS07

GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**
dichloromethane

· **Hazard statements**

H225 Highly flammable liquid and vapor.

H302 Harmful if swallowed.

H351 Suspected of causing cancer.

· **Precautionary statements**

Keep away from heat/sparks/open flames/hot surfaces. No smoking.

Use explosion-proof electrical/ventilating/lighting/equipment.

Wear protective gloves / eye protection / face protection.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:** product safety department

· **Contact:**

SPEX CertiPrep, LLC.

1-732-549-7144

· **Date of preparation / last revision** 09/29/2016 / -

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

BEI: Biological Exposure Limit

Flam. Liq. 2: Flammable liquids – Category 2

Acute Tox. 4: Acute toxicity – Category 4

Carc. 2: Carcinogenicity – Category 2