

1 Identification of substance

- **Product details**
- **Trade name:** Chlordane
- **Article number:** N9331002
- **Application of the substance / the preparation** Laboratory chemicals
- **Manufacturer/Supplier:**
PerkinElmer Life and Analytical Sciences
710 Bridgeport Avenue
Shelton, Connecticut 06484 USA
- **Information department:**
Technical Support
800-762-4000
- **Emergency information:**
CHEMTREC (within U.S.) 800 424-9300
CHEMTREC (from outside U.S.) 1(703)-527-3883

2 Composition/Data on components

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

· **Hazardous components:**

110-54-3	n-hexane	50-100%
57-74-9	chlordane (ISO)	< 1%

3 Hazards identification

· **Hazard description:**



Harmful
Highly flammable
Dangerous for the environment

· **WHMIS-symbols:**

B2 - Flammable liquid

D2A - Very toxic material causing other toxic effects



· **Information pertaining to particular dangers for man and environment:**

The product has to be labelled due to the calculation procedure of international guidelines.

Highly flammable.

Irritating to skin.

Harmful: danger of serious damage to health by prolonged exposure through inhalation.

Possible risk of impaired fertility.

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Vapours may cause drowsiness and dizziness.

· **Classification system:**

The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

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· NFPA ratings (scale 0 - 4)



Health = 2

Fire = 3

Reactivity = 0

· HMIS-ratings (scale 0 - 4)



Health = *2

Fire = 3

Reactivity = 0

4 First aid measures

· General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

Do not leave affected persons unattended.

· After inhalation:

In case of unconsciousness place patient stably in side position for transportation.

Supply fresh air and to be sure call for a doctor.

· After skin contact: Immediately wash with water and soap and rinse thoroughly.

· After eye contact: Rinse opened eye for several minutes under running water.

· After swallowing: If symptoms persist consult doctor.

5 Fire fighting measures

· **Suitable extinguishing agents:** CO₂, sand, extinguishing powder. Do not use water.

· **For safety reasons unsuitable extinguishing agents:** Water with full jet

· **Protective equipment:** No special measures required.

6 Accidental release measures

· **Person-related safety precautions:** Wear protective equipment. Keep unprotected persons away.

· Measures for environmental protection:

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.

· Measures for cleaning/collecting:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

7 Handling and storage

· Handling:

· Information 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.
- **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.

8 Exposure controls and personal protection

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

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

110-54-3 n-hexane	
EL ()	20 ppm
	Skin
EV ()	176 mg/m ³ , 50 ppm

- **Additional information:** The lists that were valid during the creation were used as basis.

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.

- **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:** Safety glasses

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9 Physical and chemical properties

· General Information

Form:	Liquid
Color:	Colorless
Odor:	Characteristic

· Change in condition

Melting point/Melting range:	-95°C
Boiling point/Boiling range:	69°C

· Flash point:	< 0°C
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· Ignition temperature:	240°C
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· Auto igniting:	Product is not selfigniting.
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· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
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· Explosion limits:

Lower:	1.2 Vol %
Upper:	7.4 Vol %

· Vapor pressure at 20°C:	160 hPa
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· Density at 20°C:	0.66 g/cm ³
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· Solubility in / Miscibility with

Water at 20°C:	0.1 g/l
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· Solvent content:

Organic solvents:	99.9 %
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10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Dangerous reactions** No dangerous reactions known.
- **Dangerous products of decomposition:** No dangerous decomposition products known.

11 Toxicological information

- **Acute toxicity:**
- **Primary irritant effect:**
 - **on the skin:** Irritant to skin and mucous membranes.
 - **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant

12 Ecological information

- **Ecotoxic effects:**
- **Remark:** Toxic for fish

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· **General notes:**

Also poisonous for fish and plankton in water bodies.
 Toxic for aquatic organisms
 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.

13 Disposal considerations

· **Product:**· **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

· **DOT regulations:**

· **Hazard class:** 3
 · **Identification number:** UN1993
 · **Packing group:** II
 · **Proper shipping name (technical name):** FLAMMABLE LIQUID, N.O.S. (HEXANES)
 · **Label:** 3

· **TDG (Transport dangerous goods):**

· **TDG class:** 3 Flammable liquids
 · **Danger code (Kemler):** 33
 · **UN-Number:** 1993
 · **Packaging group:** II
 · **Label:** 3
 · **Description of goods:** 1993 FLAMMABLE LIQUID, N.O.S. (HEXANES)

· **Maritime transport IMDG:**

· **IMDG Class:** 3
 · **UN Number:** 1993
 · **Label:** 3
 · **Packaging group:** II
 · **EMS Number:** F-E,S-E
 · **Marine pollutant:** No

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· **Propper shipping name:** FLAMMABLE LIQUID, N.O.S. (HEXANES)

· **Air transport ICAO-TI and IATA-DGR:**



· **ICAO/IATA Class:** 3
 · **UN/ID Number:** 1993
 · **Label:** 3
 · **Packaging group:** II
 · **Propper shipping name:** FLAMMABLE LIQUID, N.O.S. (HEXANES)

15 Regulations

· **Sara**

· **Section 355 (extremely hazardous substances):**

57-74-9 | chlordane (ISO)

· **Section 313 (Specific toxic chemical listings):**

All ingredients are listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

57-74-9 | chlordane (ISO)

· **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.

· **Carcinogeny categories**

· **EPA (Environmental Protection Agency)**

110-54-3 | n-hexane

II

57-74-9 | chlordane (ISO)

B2

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

57-74-9 | chlordane (ISO)

2B

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

57-74-9 | chlordane (ISO)

A3

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

57-74-9 | chlordane (ISO)

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

None of the ingredients is listed.

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· **Canadian substance listings:**

· **Canadian Domestic Substances List (DSL)**

110-54-3	n-hexane
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· **Canadian Ingredient Disclosure list (limit 0.1%)**

None of the ingredients is listed.

· **Canadian Ingredient Disclosure list (limit 1%)**

All ingredients are listed.

· **Product related hazard informations:**

The product has been classified and marked in accordance with directives on hazardous materials.

· **Hazard symbols:**

Harmful

Highly flammable

Dangerous for the environment

· **Hazard-determining components of labelling:**

n-hexane

· **Risk phrases:**

Highly flammable.

Irritating to skin.

Harmful: danger of serious damage to health by prolonged exposure through inhalation.

Possible risk of impaired fertility.

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Vapours may cause drowsiness and dizziness.

· **Safety phrases:**

Keep container in a well-ventilated place.

Keep away from sources of ignition - No smoking.

Wear suitable protective clothing and gloves.

Use appropriate container to avoid environmental contamination.

16 Other information

Disclaimer

The information provided in this Material Safety Data Sheet is based on our present knowledge, and believed to be correct at the date of publication. However, no representation is made concerning its accuracy and completeness. It is intended as guidance only, and is not to be considered a warranty or quality specification. All materials may present unknown hazards, and should be used with caution. Although certain hazards are described, we cannot guarantee that these are the only hazards which exist. PerkinElmer Life and Analytical Sciences shall not be held liable for any damage resulting from handling or from contact with the product.

· **Department issuing MSDS: Safety and Health**

· **Contact:**

With in the USA: 1-(800)-762-4000

Out side the USA: 1-(203)-712-8488