## 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product name Dicyclohexylphosphine

## 2. HAZARDS IDENTIFICATION Classification of the substance or mixture

According to Regulation (EC) No1272/2008

Flammable liquids (Category 2) Pyrophoric liquids (Category 1) Acute toxicity, Inhalation (Category 3) Acute toxicity, Dermal (Category 3) Acute toxicity, Oral (Category 3)

According to European Directive 67/548/EEC as amended. Spontaneously flammable in air. Toxic by inhalation, in contact with skin and if swallowed.

Label elements

Danger

Pictogram

Signal word

Hazard statement(s) H225 Highly flammable liquid and vapour. H250 Catches fire spontaneously if exposed to air.

H301

Toxic if swallowed. H311 Toxic in contact with skin.

H331 Toxic if inhaled. Precautionary statement(s) P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P222 P231

Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. P261 P280 Wear protective gloves/ protective clothing.

Handle under inert gas.

Do not allow contact with air.

P422 Store contents under inert gas.

T

Hazard symbol(s) F Highly flammable

Toxic

R-phrase(s)

Spontaneously flammable in air.

S17 Keep away from combustible material. Wear suitable protective clothing, gloves and eye/face protection. S36/37/39

In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

3. COMPOSITION/INFORMATION ON INGREDIENTS

: C12H23P 198,28 g/mol Molecular Weight

> Flam. Liq. 2; Pyr. Liq. 1; Acute Tox. 3; H225, H250,

H301, H311, H331 F, T, R17 - R23/24/25 Concentration

CAS-No. EC-No. Classification

829-84-5 212-590-9

For the full text of the H-Statements mentioned in this Section, see Section 16. 4. FIRST AID MEASURES

If inhaled If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water.

# Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

Consult a physician.

In case of eye contact

Flush eyes with water as a precaution. If swallowed

5. FIRE-FIGHTING MEASURES

apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

Use water spray to cool unopened containers. 6. ACCIDENTAL RELEASE MEASURES

**Further information** 

Personal precautions

Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

7. HANDLING AND STORAGE

**Precautions for safe handling** 

Respiratory protection

Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

resealed and kept upright to prevent leakage. Store in cool place. 8. EXPOSURE CONTROLS/PERSONAL PROTECTION Personal protective equipment

### Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves

Protective gloves against thermal risks

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Skin and body protection Complete suit protecting against chemicals, Flame retardant antistatic protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Hygiene measures Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the

Form liquid Colour colourless Safety data

#### Density 0,904 g/cm3 Water solubility no data available

Ignition temperature

Lower explosion limit

рН

Heat, flames and sparks. Extremes of temperature and direct sunlight. Materials to avoid Strong oxidizing agents

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Oxides of phosphorus 11. TOXICOLOGICAL INFORMATION **Acute toxicity** no data available Skin corrosion/irritation no data available

Specific target organ toxicity - single exposure no data available Specific target organ toxicity - repeated exposure

Toxic if swallowed.

May cause eye irritation.

probable, possible or confirmed human carcinogen by IARC.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as

Toxic if inhaled. May cause respiratory tract irritation.

Toxic if absorbed through skin. May cause skin irritation.

12. ECOLOGICAL INFORMATION **Toxicity** 

no data available

no data available

no data available

ADR/RID

**IMDG** 

RTECS: Not available

Eyes

Other adverse effects no data available 13. DISPOSAL CONSIDERATIONS **Product** 

UN-Number: 2845 Class: 4.2 Proper shipping name: PYROPHORIC LIQUID, ORGANIC, N.O.S. (Dicyclohexylphosphine) Marine pollutant: No **IATA** 

UN-Number: 2845 Class: 4.2

UN-Number: 2845 Class: 4.2

H250 Catches fire spontaneously if exposed to air. H301 Toxic if swallowed. H311

Toxic by inhalation, in contact with skin and if swallowed. R23/24/25 **Further information** 

For R&D use only. Not for drug, household or other uses. WARRANTY: The above information is believed to be correct but does not purport to be all inclusive and shall be

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R17 Toxic by inhalation, in contact with skin and if swallowed. R23/24/25

S45

S-phrase(s)

Other hazards - none Formula

**Dicyclohexylphosphine** 

General advice Consult a physician. Show this safety data sheet to the doctor in attendance. In case of skin contact

Suitable extinguishing media For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires,

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

Methods and materials for containment and cleaning up

**Environmental precautions** Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

charge. **Conditions for safe storage** Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully

engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Hand protection

after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with

multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to

Eye protection Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate

no data available

no data available

no data available

government standards such as NIOSH (US) or EN 166(EU).

product. 9. PHYSICAL AND CHEMICAL PROPERTIES **Appearance** 

Melting point no data available Boiling point 129 °C at 11 hPa 2 °C - closed cup Flash point

Upper explosion limit no data available 10. STABILITY AND REACTIVITY Chemical stability Stable under recommended storage conditions. Possibility of hazardous reactions Reacts violently with water. **Conditions to avoid** 

no data available Germ cell mutagenicity no data available

no data available

Carcinogenicity

no data available

Reproductive toxicity

Serious eye damage/eye irritation

Respiratory or skin sensitization

no data available Aspiration hazard no data available Potential health effects Inhalation **Ingestion** Skin

Signs and Symptoms of Exposure

Nausea, Headache, Vomiting

Persistence and degradability

**Bioaccumulative potential** 

PBT and vPvB assessment

**Additional Information** 

no data available Mobility in soil no data available

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Contaminated packaging Dispose of as unused product. 14. TRANSPORT INFORMATION

Proper shipping name: PYROPHORIC LIQUID, ORGANIC, N.O.S. (Dicyclohexylphosphine)

Packing group: I

Packing group: I

Proper shipping name: Pyrophoric liquid, organic, n.o.s. (Dicyclohexylphosphine) IATA Passenger: Not permitted for transport IATA Cargo: Not permitted for transport

15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006. 16. OTHER INFORMATION

Text of H-code(s) and R-phrase(s) mentioned in Section 3 Acute Tox. Acute toxicity Flam. Liq. Flammable liquids Highly flammable liquid and vapour. H225

Toxic in contact with skin. H331 Toxic if inhaled. Pyr. Liq. Pyrophoric liquids F Highly flammable T Toxic R17 Spontaneously flammable in air.

> used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Lookchem shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.

EMS-No: F-G, S-M