

## SAFETY DATA SHEET

According to EC 1907/2006 (REACH)

Date last verification : 2018-03-10  
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Version number : 6.1

Last modifications in sections : 2.2

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

#### 1.1. Product identifier

SDS : 27273  
 Product code :  
 Supplier : Famico Trading Limited  
 Harbury Rd 13  
 BS9 4PN Bristol  
 United Kingdom  
 TEL:+44 7585 973710  
 FAX:+44 117 244 3581

Tradename : PMHP 50-55 (LS II GRADE)

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

General description : POLYMERIZATION INITIATOR  
 Use : CROSS-LINKING AGENT  
 Uses advised against : Data not available.

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

Supplier safety data sheet : Philips Electronics Nederland B.V., Philips Environment & Safety, High Tech Campus 37, 5656 AE Eindhoven, Tel. +31 (0)40 27 41 645  
 Responsible department : hazcom@philips.com

#### 1.4. Emergency telephone number

Emergency telephone number : +44 7585 973710

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

(EC) No 1272/2008

|  |             |      |
|--|-------------|------|
| Flammable liquid                                   | Category 3  | H226 |
| Organic peroxide                                   | Category F  | H242 |
| Aspiration hazard                                  | Category 1  | H304 |
| Skin corrosion                                     | Category 1A | H314 |
| Specific target organ toxicity — repeated exposure | Category 2  | H373 |

#### 2.2. Label elements

(EC) No 1272/2008

Hazard pictogram(s)



Signal word : Danger !

Hazard statements

|      |  |
|------|--|
| H226 | Flammable liquid and vapour.                                       |
| H242 | Heating may cause a fire.  |
| H304 | May be fatal if swallowed and enters airways.                      |
| H314 | Causes severe skin burns and eye damage.                           |
| H373 | May cause damage to organs through prolonged or repeated exposure. |

**\* Precautionary statements**

|                |  |
|----------------|--|
| P210           | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.                                   |
| P234           | Keep only in original packaging.   |
| * P241         | Use explosion-proof [electrical/ventilating/lighting] equipment.   |
| P243           | Take action to prevent static discharges.  |
| P260.2         | Do not breathe vapour.   |
| P264           | Wash hands/skin thoroughly after handling.   |
| P280.5         | Wear protective gloves/protective clothing/eye protection/face protection.   |
| P301+P330+P331 | IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.   |
| P303+P361+P353 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.                              |
| P304+P340      | IF INHALED: Remove person to fresh air and keep comfortable for breathing.   |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P310           | Immediately call a POISON CENTER or doctor/physician.  |
| P331           | Do NOT induce vomiting.  |
| P403+P233+P235 | Store in a well-ventilated place. Keep container tightly closed. Keep cool.  |
| P405           | Store locked up.   |
| P410           | Protect from sunlight.   |
| * P411         | Store at temperatures not exceeding 20°C/68°F.   |
| P420           | Store separately.  |
| P501           | Dispose of contents/container to a hazardous or special waste collection point.  |

**Hazardous component(s)** P-MENTHYL HYDROPEROXIDE  
1-ISOPROPYL-4-METHYLCYCLOHEXANE

**Remarks on labelling** Classification in accordance with test series A to H as described in Part II of the UN Recommendations on the transport of Dangerous Goods (UN RTDG), Manual of Tests and Criteria.

**2.3. Other hazards**

If applicable: see section 6.1 and section 7.1.

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

| Component                       | CAS-no.<br>EC-no.       | Index No.<br>Registration no. | Percentage(%) | Label  |
|---------------------------------|-------------------------|-------------------------------|---------------|--|
| P-MENTHYL HYDROPEROXIDE         | 26762-92-5<br>247-987-6 | 01-2119971063-41              | ≥50.0 - ≤55.0 | GHS02<br>GHS05<br>GHS08<br>H242 Org. perox. F<br>H314 Skin corr. 1A<br>H373 STOT RE 2  |
| 1-ISOPROPYL-4-METHYLCYCLOHEXANE | 99-82-1<br>202-790-4    | 01-2119980038-33              | ≥45.0 - ≤50.0 | GHS02<br>GHS07<br>GHS08<br>H226 Flam. liq. 3<br>H304 Asp. tox. 1<br>H315 Skin irrit. 2 |

For the full text of the H-sentences mentioned in this section, see section 16.

**SECTION 4: First aid measures**

**4.1. Description of first aid measures**

|                   |  |
|-------------------|--|
| <b>Skin</b>       | : DO NOT touch contaminated clothes with bare hands. Remove contaminated clothes immediately. Remove residue of the substance from the skin (f.i. rinse with plenty of water). In case of serious burnings bring victim as soon as possible to the hospital, in other case call for a doctor.  |
| <b>Ingestion</b>  | : If the victim is conscious let him rinse the mouth with water. Do NOT let him drink. Bring victim as soon as possible to hospital.   |
| <b>Inhalation</b> | : Bring victim into the fresh air as soon as possible and let rest. In case of severe exposure call for a doctor. In case of breathing problems, loose squeezing clothes and if victim is conscious bring victim in high sitting position. In case of stagnation of breathing give IMMEDIATELY oxygen and transport to hospital as soon as possible. |
| <b>Eyes</b>       | : Rinse for a long time with plenty of water. In case of eye-sight disturbances bring victim immediately into the hospital, in other cases call for a doctor   |

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

Skin local : The substance is corrosive: redness, pain, severe burns, blisters.

|                  |         |   |
|------------------|---------|---|
| Ingestion        | general | : Probably no absorption worth mentioning.  |
|                  | local   | : The substance is corrosive: sore throat, abdominal pain, nausea.<br>: Chance of pulmonary affections if choked.<br>: May cause asphyxiation due to cramp or swelling of the larynx. |
|                  |         | : The substance may be absorbed after ingestion.  |
| Inhalation       | general | : The substance is with atomising corrosive: sore throat, coughing, dyspnoea.   |
|                  | local   | : Chance of pulmonary oedema: coughing and tightness of the chest, possibly after several hours.<br>: Serious cases may cause fatal end.  |
|                  |         | : The substance may be absorbed after inhalation.   |
| Eyes             | general | : The substance is corrosive: redness, pain, poor vision.   |
|                  | local   |   |
| Remarks symptoms |         | : May cause damage to organs through prolonged or repeated exposure.  |
|                  |         | : The substance has an effect on: the blood.  |

#### 4.3. Indication of any immediate medical attention and special treatment needed

For advice on further treatment contact a (national) poison center.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

#### Suitable fire-extinguisher

carbon dioxide, extinguishing powder, water spray, alcohol resistant foam

#### Unsuitable fire-extinguisher

not traceable

### 5.2. Special hazards arising from the substance or mixture

**Hazardous decomposition products in fire** : carbon monoxide

### 5.3. Advice for firefighters

In the event of fire, wear protective clothing and use breathing apparatus that is independent of the ambient air.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### Precautions

Use protective equipment. See section 8.

Read label before use.

Take precautionary measures against static discharge.

#### Emergency procedure

Risk of explosion! Acute risk to health! IMMEDIATELY evacuate and close off the danger zone. Notify expert!

### 6.2. Environmental precautions

Remainder material or uncleaned empty packagings have to be incinerated in a proper installation or dumped on an approved landfill, in accordance with local and national legislation.

### 6.3. Methods and material for containment and cleaning up

#### Spillage procedure

Absorb the liquid in appropriate absorbent (e.g. Powersorb, dry sand, diatomite, vermiculite etc.), shovel the mixture into plastic bags and remove to the central depot for hazardous waste.

### 6.4. Reference to other sections

See section 8 for appropriate personal protection.

See section 13 for additional information on waste treatment.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Observe label precautions.

Do not eat, drink or smoke in work areas. Remove contaminated clothing and protective equipment. Wash hands after leaving the work area.

Take precautionary measures against static discharge.

**Local exhausting** : Apply local exhaust.

**Storage code (on behalf of PGS** : P1

15)

## 7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions** : See also any precautionary statements in section 2.2.  
Store product protected from the sun, away from ignition sources or heat sources, cool, dry, in a well ventilated area, in a closed, original container, away from reducing agents, away from heavy metal compounds, away from acids, away from alkalis.
- Storage temperature** : ≤20 °C

## 7.3. Specific end use(s)

Data not available.

# SECTION 8: Exposure controls/personal protection

## 8.1. Control parameters

### Exposure limits :

**applicable to:** The Netherlands

No TWA has been laid down.

P-MENTHYL HYDROPEROXIDE

No TWA has been laid down.

1-ISOPROPYL-4-METHYLCYCLOHEXANE

C=Ceiling; S=Skin

### Remarks exposure limits :

none

### DNEL (Derived No Effect Level)

Worker - Inhalation - Long term exposure - Local effects: 0.62 mg/m<sup>3</sup>

P-MENTHYL HYDROPEROXIDE

Source : Supplier

Worker - Dermal - Long term exposure - Local effects: 0.003 mg/cm<sup>2</sup>

P-MENTHYL HYDROPEROXIDE

Source : Supplier

Worker - Dermal - Long term exposure - Systemic effects: 1.1 mg/kg

1-ISOPROPYL-4-METHYLCYCLOHEXANE

Source : Supplier

Worker - Inhalation - Long term exposure - Systemic effects: 7.7 mg/m<sup>3</sup>

1-ISOPROPYL-4-METHYLCYCLOHEXANE

Source : Supplier

### PNEC (Predicted No Effect Concentration)

Fresh water: 0.00085 mg/l

P-MENTHYL HYDROPEROXIDE

Source : Supplier

Marine water: 0.000085 mg/l

P-MENTHYL HYDROPEROXIDE

Source : Supplier

Fresh water sediment: 0.0273 mg/kg

P-MENTHYL HYDROPEROXIDE

Source : Supplier

Marine water sediment: 0.00273 mg/kg

P-MENTHYL HYDROPEROXIDE

Source : Supplier

Soil: 0.00497 mg/kg

P-MENTHYL HYDROPEROXIDE

Source : Supplier

Sewage Treatment Plant (STP): 0.481 mg/l

P-MENTHYL HYDROPEROXIDE

Source : Supplier

Fresh water: 0.62 µg/l

1-ISOPROPYL-4-METHYLCYCLOHEXANE

Source : Supplier

Marine water: 0.062 µg/l

1-ISOPROPYL-4-METHYLCYCLOHEXANE

Source : Supplier

Fresh water sediment: 0.131 mg/kg

1-ISOPROPYL-4-METHYLCYCLOHEXANE

Source : Supplier

Marine water sediment: 0.013 mg/kg

1-ISOPROPYL-4-METHYLCYCLOHEXANE

Source : Supplier

Soil: 2 mg/kg

1-ISOPROPYL-4-METHYLCYCLOHEXANE

Source : Supplier

Sewage Treatment Plant (STP): 100 mg/l

1-ISOPROPYL-4-METHYLCYCLOHEXANE

Source : Supplier

## 8.2. Exposure controls

### Advised personal protection :

- Hands** : butyl rubber gloves  
polyvinyl chloride gloves
- Breakthrough time** : protection index class 6, corresponding > 480 minutes breakthrough time/permeation according to EN 374.
- Eyes** : acid goggles  
face mask
- Inhalation** : none (when sufficient exhausting)
- Skin** : antistatic clothing  
antistatic footwear

# SECTION 9: Physical and chemical properties

## 9.1. Information on basic physical and chemical properties

- Physical state** : liquid
- Colour** : colourless / yellow
- Odour** : specific
- Odour threshold (20°C; 1013 mbar)** : not traceable
- pH** : >4.0
- Melting point/range** : <-30 °C
- Boiling point/range** : not traceable
- Flash point/range** : 50 °C
- Vapor rate/range** : not traceable
- Flammability (solid, gas)** : data not available
- Explosive limits** : not traceable
- Vapour pressure** : 0.5 kPa (20 °C)

|  |   |                                 |                           |
|--|---|---------------------------------|---------------------------|
| <b>Relative density</b>                | : $\geq 0.875$ - $\leq 0.920$ (water=1) (20 °C) |                                 |                           |
| <b>Solubility in water</b>             | : 4.0 g/l (20 °C)                               |                                 |                           |
| <b>Log Po/w</b>                        | : 3.59  | P-MENTHYL HYDROPEROXIDE         | <b>Source</b> : Easi View |
|  | 4.92  | 1-ISOPROPYL-4-METHYLCYCLOHEXANE | <b>Source</b> : Easi View |
| <b>Autoignition temperature</b>        | : not traceable                                 |                                 |                           |
| <b>Decomposition temperature</b>       | : >60 °C  |                                 |                           |
| <b>Viscosity</b>                       | : 8.0 mPa.s (20 °C)                             |                                 |                           |
| <b>Dust explosions possible in air</b> | : not applicable                                |                                 |                           |
| <b>Oxidising properties</b>            | : no  |                                 |                           |

## 9.2. Other information

|                             |                 |
|-----------------------------|-----------------|
| <b>Solubility in fat</b>    | : not traceable |
| <b>Electrostatic charge</b> | : yes           |

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

See section 10.2 - 10.6.

### 10.2. Chemical stability

The substance or mixture is stable under normal conditions. See also section 10.4.

### 10.3. Possibility of hazardous reactions

|                                   |                       |
|-----------------------------------|-----------------------|
| <b>Reactions with water</b>       | : no                  |
| <b>Other hazardous conditions</b> | : Data not available. |

### 10.4. Conditions to avoid

Temperature  $\geq 60$  °C (SADT)  
Avoid discharge of static electricity.

### 10.5. Incompatible materials

**Hazardous reactions with** : acids, alkaline solutions, amines, heavy metals, reducing substances

### 10.6. Hazardous decomposition products

**Hazardous decomposition products at heating** : phenol, acetone

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

|                              |                                 |                          |                          |
|------------------------------|---------------------------------|--------------------------|--------------------------|
| <b>Acute oral toxicity</b>   |                                 |                          |                          |
| LD-50: >2.0 g/kg (ORL-RAT)   | P-MENTHYL HYDROPEROXIDE         | <b>Method</b> : OECD 401 | <b>Source</b> : Supplier |
| LD-50: >2.0 g/kg (ORL-RAT)   | 1-ISOPROPYL-4-METHYLCYCLOHEXANE | <b>Method</b> : OECD 401 | <b>Source</b> : Supplier |
| LD-50: >2.0 g/kg (ORL-RAT)   | (Total product)                 |                          |                          |
| <b>Acute dermal toxicity</b> |                                 |                          |                          |
| LD-50: >2.0 g/kg (SKN-RAT)   | 1-ISOPROPYL-4-METHYLCYCLOHEXANE | <b>Method</b> : OECD 402 | <b>Source</b> : Supplier |

**Acute inhalation toxicity**  
There are no data available.

**Ames test**  
not traceable

**Skin corrosion/irritation**  
Causes severe skin burns and eye damage.

**Serious eye damage/irritation**  
The substance or mixture is not classified for serious eye damage/irritation.

**Respiratory or skin sensitisation**  
The substance or mixture is not classified for respiratory or skin sensitisation.

**Germ cell mutagenicity**  
The substance or mixture is not classified for germ cell mutagenicity.

**Carcinogenicity**  
The substance or mixture is not classified for carcinogenicity.

**Additional information regarding carcinogenicity (NTP, IARC, OSHA)**

|         |          |          |                                 |
|---------|----------|----------|---------------------------------|
| NTP: no | IARC: no | OSHA: no | P-MENTHYL HYDROPEROXIDE         |
| NTP: no | IARC: no | OSHA: no | 1-ISOPROPYL-4-METHYLCYCLOHEXANE |

### Reproductive toxicity

The substance or mixture is not classified for reproductive toxicity.

### Specific target organ toxicity-single exposure

The substance or mixture is not classified for specific target organ toxicity-single exposure.

### Specific target organ toxicity-repeated exposure

May cause damage to organs through prolonged or repeated exposure.

### Aspiration hazard

May be fatal if swallowed and enters airways.

### Symptoms

|                  |         |   |  |
|------------------|---------|---|--|
| Skin             | local   | : | The substance is corrosive: redness, pain, severe burns, blisters.                             |
|                  | general | : | Probably no absorption worth mentioning.   |
| Ingestion        | local   | : | The substance is corrosive: sore throat, abdominal pain, nausea.                               |
|                  |         | : | Chance of pulmonary affections if choked.  |
| Inhalation       |         | : | May cause asphyxiation due to cramp or swelling of the larynx.                                 |
|                  | general | : | The substance may be absorbed after ingestion.   |
|                  | local   | : | The substance is with atomising corrosive: sore throat, coughing, dyspnoea.                    |
|                  |         | : | Chance of pulmonary oedema: coughing and tightness of the chest, possibly after several hours. |
| Eyes             | general | : | Serious cases may cause fatal end.   |
|                  | local   | : | The substance may be absorbed after inhalation.  |
| Remarks symptoms |         | : | The substance is corrosive: redness, pain, poor vision.  |
|                  |         | : | The substance has an effect on: the blood.   |

## SECTION 12: Ecological information

### 12.1. Toxicity

#### Ecotoxicity

|                                    |                         |               |            |
|------------------------------------|-------------------------|---------------|------------|
| LC-50: >1 - ≤10 mg/l/96H (Fish)    | P-MENTHYL HYDROPEROXIDE | <b>Source</b> | : Supplier |
| EC-50: >1 - ≤10 mg/l/48H (Daphnia) | P-MENTHYL HYDROPEROXIDE | <b>Source</b> | : Supplier |
| IC-50: >10 - ≤100 mg/l/72H (Algae) | P-MENTHYL HYDROPEROXIDE | <b>Source</b> | : Supplier |

### 12.2. Persistence and degradability

|  |                 |                                 |                          |
|--|-----------------|---------------------------------|--------------------------|
| <b>Biological oxygen demand</b>                | : not traceable |                                 |                          |
| <b>Chemical oxygen demand</b>                  | : not traceable |                                 |                          |
| <b>Biological/chemical oxygen demand ratio</b> | : not traceable |                                 |                          |
| <b>Degradability</b>                           | : readily       | P-MENTHYL HYDROPEROXIDE         | <b>Source</b> : Supplier |
|  | : readily       | 1-ISOPROPYL-4-METHYLCYCLOHEXANE | <b>Source</b> : Supplier |

### 12.3. Bioaccumulative potential

|                                      |        |                                 |                           |
|--------------------------------------|--------|---------------------------------|---------------------------|
| <b>Bioconcentration factor (BCF)</b> | : 31   | P-MENTHYL HYDROPEROXIDE         | <b>Source</b> : Supplier  |
| <b>Log Po/w</b>                      | : 3.59 | P-MENTHYL HYDROPEROXIDE         | <b>Source</b> : Easi View |
|                                      | : 4.92 | 1-ISOPROPYL-4-METHYLCYCLOHEXANE | <b>Source</b> : Easi View |

### 12.4. Mobility in soil

|                       |                      |                                 |                           |
|-----------------------|----------------------|---------------------------------|---------------------------|
| <b>Henry Constant</b> | : 3.03E-4 atm m3/mol | P-MENTHYL HYDROPEROXIDE         | <b>Source</b> : Easi View |
|                       | : 1.76 atm m3/mol    | 1-ISOPROPYL-4-METHYLCYCLOHEXANE | <b>Source</b> : Easi View |

### 12.5. Results of PBT and vPvB assessment

Data not available.

### 12.6. Other adverse effects

Remarks on ecotoxicity : none

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Remainder material or uncleaned empty packagings have to be incinerated in a proper installation or dumped on an approved landfill, in accordance with local and national legislation.

## SECTION 14: Transport information

#### 14.1. UN number

ADR/RID : 3109  
IMDG/IMO : 3109  
IATA/ICAO : 3109

#### 14.2. UN proper shipping name

ADR/RID : ORGANIC PEROXIDE TYPE F, LIQUID(P-MENTHYL HYDROPEROXIDE)  
IMDG/IMO : ORGANIC PEROXIDE TYPE F, LIQUID(P-MENTHYL HYDROPEROXIDE)  
IATA/ICAO : ORGANIC PEROXIDE TYPE F, LIQUID(P-MENTHYL HYDROPEROXIDE)

#### 14.3. Transport hazard class(es)

ADR/RID : 5.2                      IMDG/IMO : 5.2                      IATA/ICAO : 5.2

#### 14.4. Packing group

ADR/RID : none                      IMDG/IMO : none                      IATA/ICAO : none

#### 14.5. Environmental hazards

Marine pollutant : no

#### 14.6. Special precautions for user

Hazard identification number (ADR/RID) : 539  
EmS (IMDG/IMO) : F-J, S-R

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

Data not available.

### SECTION 15: Regulatory information

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

- Water Hazard Class (WGK) = 2

#### 15.2. Chemical safety assessment

- Data not available.

### SECTION 16: Other information

Remarks on SDS : none

#### Overview relevant H-sentences from all components in section 3

H226 Flammable liquid and vapour.  
H242 Heating may cause a fire.  
H304 May be fatal if swallowed and enters airways.  
H314 Causes severe skin burns and eye damage.  
H315 Causes skin irritation.  
H373 May cause damage to organs through prolonged or repeated exposure.

#### Training advice

Provide adequate information, instruction and training for operators.

#### A key or legend to abbreviations and acronyms used in the safety data sheet

REACH Registration, Evaluation and Authorisation of Chemicals  
GHS Globally Harmonised System of Classification and Labelling of Chemicals  
CAS Chemical Abstracts Service  
TGG = TWA Time Weighted Average  
LEL Lower Explosive Limit  
UEL Upper Explosive Limit  
NTP National Toxicology Program  
KHC Known Human Carcinogen  
RAHC Reasonably Anticipated Human Carcinogen  
IARC International Agency for Research on Cancer  
OSHA Occupational Safety & Health Administration  
ADR Accord européen relatif au transport international des marchandises Dangereuses par Route  
RID Règlement concernant le transport international ferroviaire des marchandises dangereuses  
UN United Nations  
IMDG International Maritime Dangerous Goods

IMO International Maritime Organization  
IATA International Air Transport Association  
ICAO International Civil Aviation Organization  
EmS Emergency Schedule

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\* Point to alterations with regard to the previous version.

The information provided in this Safety Data Sheet is believed to be correct as of the date issued. Philips Electronics Nederland B.V. makes no warranty as to its contents, nor as to its fitness for any particular purpose or use.