

SAFETY DATA SHEET

According to EC 1907/2006 (REACH)

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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

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

Skin	: 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.
Ingestion	: 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.
Inhalation	: 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.
Eyes	: 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. : Chance of pulmonary affections if choked. : 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. : 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/m³

P-MENTHYL HYDROPEROXIDE

Source : Supplier

Worker - Dermal - Long term exposure - Local effects: 0.003 mg/cm²

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/m³

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)

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

9.2. Other information

Solubility in fat	: not traceable
Electrostatic charge	: 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

Reactions with water	: no
Other hazardous conditions	: Data not available.

10.4. Conditions to avoid

Temperature ≥ 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

Acute oral toxicity			
LD-50: >2.0 g/kg (ORL-RAT)	P-MENTHYL HYDROPEROXIDE	Method : OECD 401	Source : Supplier
LD-50: >2.0 g/kg (ORL-RAT)	1-ISOPROPYL-4-METHYLCYCLOHEXANE	Method : OECD 401	Source : Supplier
LD-50: >2.0 g/kg (ORL-RAT)	(Total product)		
Acute dermal toxicity			
LD-50: >2.0 g/kg (SKN-RAT)	1-ISOPROPYL-4-METHYLCYCLOHEXANE	Method : OECD 402	Source : 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	Source	: Supplier
EC-50: >1 - ≤10 mg/l/48H (Daphnia)	P-MENTHYL HYDROPEROXIDE	Source	: Supplier
IC-50: >10 - ≤100 mg/l/72H (Algae)	P-MENTHYL HYDROPEROXIDE	Source	: Supplier

12.2. Persistence and degradability

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

12.3. Bioaccumulative potential

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

12.4. Mobility in soil

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

* 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.