



SAFETY DATA SHEET – Part.1 of 2.

According to Regulation (EC) No 1907/2006, Annex II, as amended by Regulation (EU) 2015/830

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

1.1. Product identifier

Product Name PermaFyx L272
Product Inclusion Part.1 of this document covers PermaFyx L272 only.

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

Identified Uses Paints and varnishes
Uses advised against None

1.3. Details of the supplier of the safety data sheet

Supplier Meon Ltd.
 Railside
 Northharbour Spur
 Portsmouth
 PO6 3TU
 +44 (0) 23 9220 0606
 mail@meonuk.com

1.4. Emergency Telephone Number

Emergency telephone +44 (0) 808 118 1922

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

Flam. Liq. 2 / H225	Flammable liquids	Highly flammable liquid and vapour.
Skin Irrit. 2 / H315	Skin corrosion/irritation	Causes skin irritation.
Skin Sens. 1 / H317	Respiratory or skin sensitisation	May cause an allergic skin reaction.
STOT SE 3 / H335	STOT-single exposure	May cause respiratory irritation.

2.2. Label Elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms



Signal word Danger
Hazard statements H225 - Highly flammable liquid and vapour.
 H315 - Causes skin irritation.

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Precautionary statements

H317 - May cause an allergic skin reaction.
 H335 - May cause respiratory irritation.
 P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.
 No smoking
 P280 - Wear protective gloves and eye/face protection.
 P370 + P378 - In case of fire: Use extinguishing powder or sand to extinguish.
 P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.
 P403 + P235 - Store in a well-ventilated place. Keep cool

Hazard components for labelling

Methyl methacrylate
 2-ethylhexyl acrylate

Supplemental Hazard information (EU)

EUH211 Warning! Hazardous respirable droplets may be formed when sprayed.
 Do not breathe spray or mist.

2.3. Other hazards

Other hazards No information available

SECTION 3: Composition/information on ingredients

3.1. Substances

3.2. Mixtures

Designation // Remark	Identification	Classification (EC) 1272/2008 [CLP]	Wt %
Methyl methacrylate	CAS No: 80-62-6 EC-No: 201-297-1 Index-No: 607-035-00-6 REACH No: 01-2119452498-28-XXXX	Flam. Liq. 2 H225 STOT SE 3 H335 Skin Irrit. 2 H315 Skin Sens. 1 H317 GHS02 GHS07 Dgr	12.5 - 20
2-ethylhexyl acrylate	CAS No: 103-11-7 EC-No: 203-080-7 Index-No: 607-107-00-7 REACH No: 01-2119453158-37-XXXX	Skin Irrit. 2 H315 Skin Sens. 1 H317 STOT SE 3 H335 GHS07 Wng	10 - 12.5
2,2-Ethylendioxi-diethylmethacrylate	CAS No: 109-16-0 EC-No: 203-652-6 REACH No: 01-2119969287-21-XXXX	Skin Irrit. 2 H315 Eye Irrit. 2 H319 STOT SE 3 H335	1 - 2.5

Additional information

Full text of classification see section 16.

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SECTION 4: First aid measures

As a general rule, in case of doubt or if symptoms persist, always call a doctor.

4.1. Description of first aid measures

General	In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness give nothing by mouth, place in recovery position and seek medical advice.
Inhalation	Remove casualty to fresh air and keep warm and at rest. In case of irregular breathing or respiratory arrest provide artificial respiration.
Skin contact	Take off immediately all contaminated clothing. After contact with skin, wash immediately with plenty of water and soap. Do not use solvents or thinners.
Eye contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical advice immediately.
Ingestion	If swallowed, rinse mouth with water (only if the person is conscious). Seek medical advice immediately. Keep victim calm. Do NOT induce vomiting.

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

In all cases of doubt, or when symptoms persist, seek medical advice.

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

First Aid, decontamination, treatment of symptoms.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Alcohol resistant foam, carbon dioxide, Powder, spray mist, (water).

Unsuitable extinguishing media Strong water jet

5.2. Special hazards arising from the substance or mixture

Fire hazard Dense black smoke occurs during fire. Inhaling hazardous decomposing products can cause serious health damage.

5.3. Advice for firefighters

Advice for firefighters Provide a conveniently located respiratory protective device. Cool closed containers that are near the source of the fire. Do not allow water used to extinguish fire to enter drains, ground or waterways.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Precautions Keep away from sources of ignition. Ventilate affected area. Do not breathe vapours.

6.2. Environmental precautions

Environmental precautions Do not allow to enter into surface water or drains. If the product contaminates lakes, rivers or sewages, inform competent authorities in accordance with local regulations.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Isolate leaked material using non-flammable absorption agent (e.g., sand, earth, vermiculite, diatomaceous earth) and collect it for disposal in appropriate containers in accordance with the local regulations (see Section 13). Clean using cleansing agents. Do not use solvents.

6.4. Reference to other sections

Reference to other sections Observe protective provisions (see Section 7 and 8).

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SECTION 7: Handling and storage

Requirements relating to storage premises apply to all facilities where the mixture is handled.

7.1. Precautions on safe handling

Advice on safe handling

Avoid formation of flammable and explosive vapour concentrations in the air and exceeding the exposure limit values. Only use the material in places where open light, fire and other flammable sources can be kept away. Electrical equipment must be protected meeting the accepted standard. Product may become electrostatically charged. Provide earthing of containers, equipment, pumps and ventilation facilities. Anti-static clothing including shoes are recommended. Floors must be electrically conductive. Keep away from heat sources, sparks and open flames. Use only spark proof tools. Avoid contact with skin, eyes and clothes. Do not inhale dusts, particulates and spray mist when using this preparation. Avoid respiration of swarf. When using do not eat, drink or smoke. Personal protection equipment: refer to section 8. Do not empty containers with pressure - no pressure vessel! Always keep in containers that correspond to the material of the original container. Follow the legal protection and safety regulations.

Further information

Vapours are heavier than air. Vapours form explosive mixtures with air.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Storage in accordance with the Ordinance on Industrial Safety and Health (BetrSiVO). Keep container tightly closed. Do not empty containers with pressure - no pressure vessel! Smoking is forbidden. Access only for authorised persons. Store carefully closed containers upright to prevent any leaks. Soils have to conform to the "Guidelines for avoidance of ignition hazards due to electrostatic charges (TRBS 2153)".

Hints on joint storage

Keep away from strongly acidic and alkaline materials as well as oxidizers.

Further information on storage conditions

Take care of instructions on label. Store in a well-ventilated and dry room at temperatures between 10 °C and 25 °C. Protect from heat and direct sunlight. Keep container tightly closed. Remove all sources of ignition. Smoking is forbidden. Access only for authorised persons. Store carefully closed containers upright to prevent any leaks.

7.3. Specific end use(s)

Specific end use(s)

Observe technical data sheet. Observe instructions for use.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limit values:

Methyl methacrylate

INDEX No. 607-035-00-6 / EC No. 201-297-1 / CAS No. 80-62-6

WEL, TWA: 208 mg/m³; 50 ppm

WEL, STEL: 416 mg/m³; 100 ppm

Additional information

TWA: long-term occupational exposure limit value

STEL: short-term occupational exposure limit value

Ceiling: peak limitation

8.2. Exposure controls

General

Provide good ventilation. This can be achieved with local or room suction. If this should not be sufficient to keep aerosol and solvent vapour concentration below the exposure limit values, a suitable respiratory protection must be used.

Respiratory protection

If concentration of solvents is beyond the occupational exposure limit values, approved and suitable respiratory protection must be used. Observe the wear time limits according GefStoffV in combination with the rules for using respiratory protection apparatus (BGR

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190). Use only respiratory protection equipment with CE-symbol including four digit test number.

Hand protection	For prolonged or repeated handling the following glove material must be used: CR (polychloroprene, chloroprene rubber) Thickness of the glove material > 0.4 mm; Breakthrough time (maximum wearing time) > 480 min. Observe the instructions and details for use, storage, maintenance and replacement provided by the protective glove manufacturer. Penetration time of glove material depending on intensity and duration of exposure to skin. Recommended glove articles EN ISO 374. Barrier creams can help protecting exposed skin areas. In no case should they be used after contact.
Eye/face protection	Wear closely fitting protective glasses in case of splashes.
Body protection	Wear antistatic clothing of natural fibers (cotton) or heat resistant synthetic fibers.
Protective measures	After contact clean skin thoroughly with water and soap or use appropriate cleanser.
Environmental exposure controls	Do not allow to enter into surface water or drains. See Section 7. No additional measures necessary.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid
Colour	Refer to label
Odour	Characteristic
Odour threshold	Not applicable
pH at 20 °C	Not applicable
Melting point/freezing point	Not applicable
Initial boiling point and boiling range	Not applicable
Flash point	10 °C Method: DIN 53213
Evaporation rate	Not applicable
Flammability	
<i>Burning time:</i>	Not applicable
Upper/lower flammability or explosive limits	
<i>Lower explosion limit:</i>	0.8 Vol-%
<i>Upper explosion limit:</i>	Not applicable
Vapour pressure at 20 °C	Not applicable
Vapour density	Not applicable
Relative density	
Density at 20 °C	1.52 g/cm ³
Solubility(ies)	
<i>Water solubility (g/L) at 20 °C</i>	Insoluble
Partition coefficient: n-octanol/water	see Section 12
Auto-ignition temperature	Not applicable
Decomposition temperature	Not applicable
Viscosity at 20 °C	50 s 6 mm Method: DIN 53211
Explosive properties	Not applicable

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Oxidising properties Not applicable

9.2. Other information

Solid content (%) 100 Weight %

Solvent content

Organic solvents 0 Weight %

Water 0 Weight %

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity No information available.

10.2. Chemical stability

Stability Stable when applying the recommended regulations for storage and handling. Further information on correct storage: refer to Section 7.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Keep away from strong acids, strong bases and strong oxidizing agents to avoid exothermic reactions.

10.4. Conditions to avoid

Conditions to avoid Hazardous decomposition by-products may form with exposure to high temperatures.

10.5. Incompatible materials

Materials to avoid Not applicable

10.6. Hazardous decomposition products

Hazardous decomposition products Hazardous decomposition by-products may form with exposure to high temperatures, e.g.: carbon dioxide, carbon monoxide, smoke, nitrogen oxides.

SECTION 11: Toxicological information

Classification according to Regulation (EC) No 1272/2008 [CLP]

No data on preparation itself available.

11.1. Information on toxicological effects

Acute toxicity

Based on available data, the classification criteria are not met.

Skin corrosion/irritation; Serious eye damage/eye irritation

Causes skin irritation.

Respiratory or skin sensitisation

May cause an allergic skin reaction.

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Based on available data, the classification criteria are not met.

STOT-single exposure; STOT-repeated exposure

May cause respiratory irritation.

Aspiration hazard

Based on available data, the classification criteria are not met.

Practical experience/human evidence

Overall Assessment on CMR properties

The ingredients in this mixture do not meet the criteria for classification as CMR category 1A or 1B according to CLP.

SECTION 12: Ecological information

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Classification according to Regulation (EC) No 1272/2008 [CLP]

There is no information available on the preparation itself.

Do not allow to enter into surface water or drains.

12.1. Toxicity

Based on available data, the classification criteria are not met.

12.2. Persistence and degradability

Toxicological data are not available.

12.3. Bioaccumulative potential

Toxicological data are not available.

12.4. Mobility in soil

Toxicological data are not available.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations

Proper waste management of the mixture and/or its container must be determined in accordance with Directive 2008/98/EC.

13.1. Waste treatment methods

Appropriate disposal / Product Recommendation

Do not allow to enter into surface water or drains. This material and its container must be disposed of in a safe way. Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

List of proposed waste codes/waste designations in accordance with EWC

080111*

Waste paint and varnish containing organic solvents or other dangerous substances
*Hazardous waste according to Directive 2008/98/EC (waste framework directive).

Appropriate disposal / Package Recommendation

Non-contaminated packages may be recycled. Vessels not properly emptied are special waste.

SECTION 14: Transport information

Transport product in compliance with provisions of the ADR for road, RID for rail, IMDG for sea and ICAO/IATA for Air Transport.

14.1. UN number

UN number UN 1263

14.2. UN proper shipping name

ADR/RID Paint
IMDG PAINT
IATA-DGR / ICAO-TI Paint

14.3. Transport hazard class(es)

Transport hazard class(es) 3

14.4. Packing group

ADR III
for packages > 450 litres II
IMDG II

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IATA-DGR / ICAO-TI II

14.5. Environmental hazards

ADR/RID Not applicable
Marine pollutant Not applicable

14.6. Special precautions for user

Transport always in closed, upright and safe containers. Make sure that persons transporting the product know what to do in case of an accident or leakage.

Advices on safe handling: see parts 6 - 8

Further information

ADR/RID

tunnel restriction code E
for packages > 450 litres D/E

IMDG

EmS-No. F-E, S-E

IATA-DGR / ICAO-TI

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

Not applicable

SECTION 15: Regulatory information

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

EU legislation

Directive 2010/75/EU on VOC-value (in g/L): 3
industrial emissions

National regulations

Restrictions of occupation Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.
Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

15.2. Chemical safety assessment

EC No. CAS No.	Designation	REACH No.
201-297-1 80-62-6	Methyl methacrylate	01-2119452498-28-XXXX

SECTION 16: Other information

Full text of classification in section 3

Flam. Liq. 2 / H225	Flammable liquids	Highly flammable liquid and vapour.
STOT SE 3 / H335	STOT-single exposure	May cause respiratory irritation.
Skin Irrit. 2 / H315	Skin corrosion/irritation	Causes skin irritation.
Skin Sens. 1 / H317	Respiratory or skin sensitisation	May cause an allergic skin reaction.
Eye Irrit. 2 / H319	Serious eye damage/eye irritation	Causes serious eye irritation.

Classification procedure

Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

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Flam. Liq. 2	Flammable liquids	On basis of test data.
Skin Irrit. 2 / H315	Skin corrosion/irritation	Calculation method.
Skin Sens. 1 / H317	Respiratory or skin sensitisation	Calculation method.
STOT SE 3	STOT-single exposure	Calculation method.

Abbreviations and acronyms

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
OEL	Occupational Exposure Limit Value
BLV	Biological Limit Value
CAS	Chemical Abstracts Service
CLP	Classification, Labelling and Packaging
CMR	Carcinogenic, Mutagenic and Reprotoxic
DIN	German Institute for Standardization / German industrial standard
DNEL	Derived No-Effect Level
EAKV	European Waste Catalogue Directive
EC	Effective Concentration
EC	European Community
EN	European Standard
IATA-DGR	International Air Transport Association – Dangerous Goods Regulations
IBC Code	International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
ICAO-TI	International Civil Aviation Organization Technical Instructions for the Safe Transport of Dangerous Goods by Air
IMDG Code	International Maritime Code for Dangerous Goods
ISO	International Organization for Standardization
LC	Lethal Concentration
LD	Lethal Dose
MARPOL	Maritime Pollution: The International Convention for the Prevention of Pollution from Ships
OECD	Organisation for Economic Cooperation and Development
PBT	persistent, bioaccumulative, toxic
PNEC	Predicted No Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
UN	United Nations
VOC	Volatile Organic Compounds
vPvB	very persistent and very bioaccumulative

Further information Classification according to Regulation (EC) No 1272/2008 [CLP]

Disclaimer

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.



SAFETY DATA SHEET – Part.2 of 2.

According to Regulation (EC) No 1907/2006, Annex II, as amended by Regulation (EU) 453/2010

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

1.1. Product identifier

Product Name	MMA Resin Peroxide
Product Inclusion	Part.2 of this document covers the Magma PermaFyx L272 MMA Based Pavement Repair – catalyst only.
Container Size	80g

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

Identified Uses	Hardener for road marking filler (3 components) Mix only the Catalyst Part B Respect the dosage Part B/hardener indicated by the supplier. Professional use only
Uses advised against	No specific uses advised against are identified.

1.3. Details of the supplier of the safety data sheet

Supplier	Meon Ltd. Railside Northarbour Spur Portsmouth PO6 3TU +44 (0) 23 9220 0606 mail@meonuk.com
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1.4. Emergency Telephone Number

Emergency telephone	+44 (0) 808 118 1922
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

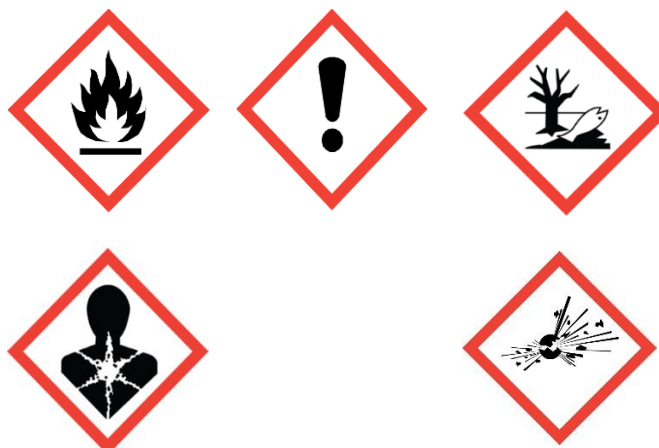
Classification according to regulation EC1272/2008 and amendments

Org. Perox. D Category D – H242
 SKIN Sens. 1 – Hazard category 1 – H317
 Eye Irrit. 2 – Hazard category 2 – H319
 Aquatic Acute. 1 – Hazard category 1 – H400
 Aquatic Chronic. 1 – Hazard. Category 1 – H410
 Repr. 1B – Hazard Category 1B – H360D

2.2. Label Elements

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Hazard pictograms



Signal word

Danger

H-statement(s)

H242 – Heating may cause a fire.
H317 – May cause an allergic skin reaction.
H319 – Causes serious eye irritation.
H360D May damage the unborn child.
H410 Very toxic to aquatic life with long lasting effects

P-statement(s)

P210 - Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P220 Keep away from strong acids, bases, heavy metals salts and other reducing substances.
P234 Keep only in original container.
P261 Avoid breathing dust/vapours.
P273 – Avoid release to the environment.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove cc lenses, if present and easy to do. Continue rinsing.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P501 - Dispose of contents/container in accordance with local and national regulation

2.3. Other hazards

The mixture component: dicyclohexyl phthalate CAS: 84-61-7 is on the Candidate List SVHC

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SECTION 3: Composition/information on ingredients

SUBSTANCE [] MIXTURE [X]

Dangerous component(s)

Ingredient	CAS No. EC No. REACH No.	Index	Classification (EC) 1272/2008	Concentration
Dibenzoyl peroxide	94-36-0 202-327-6 01-2119511472-50-0001	617-008-00-0	Org. Perox. B – H241 Skin Sens. 1 – H317 Eye Irrit. 2 – H319 Aquatic Acute 1 – H400 (M=10)** Aquatic Chronic 1, H410; M=10 GHS01 GHS02 GHS07 Dgr	49-52.5%
Diclohexyl phtalate	84-61-7 201-545-9 01-2119978223-34-0000	607-719-00-4	Skin Sens. 1, H317 Repr. 1B, H360D Aquatic Chronic 3, H412	47.5-51%
silicon dioxide obtained by chemical transformation	112926-00-8 7631-86-9 231-545-4 01-2119379499-16-0000	-	Not classified	<0.5%

SECTION 4: First aid measures

As a general rule, in case of doubt or if symptoms persist, always call a doctor.

4.1. Description of first aid measures

- In case of inhalation:** Move immediately subject to fresh air and keep him calm.
Place the victim in a position where it can easily breathe.
If breathing is difficult, seek medical attention.
- In case of skin contact:** Wash immediately with non-abrasive soap and plenty of water, at least 15 minutes. If skin irritation persists, consult a doctor.
Wash contaminated clothing before re-using.
- In case of eye contact:** Rinse immediately with plenty of water for at least 15 minutes, holding eyelids open.
If the person uses contact lenses, remove them with caution.
Quickly consult a specialist if irritation persists.
- In case of ingestion:** Do not induce vomiting. Get medical attention immediately.

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

Sensitization of the skin - redness, swelling, irritation of the eyes.
Suspected of damaging fertility or the unborn child

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media water spray, carbon dioxide, foam, sand.

Extinguishing media which must not be used for safety reasons Do not use halons.

5.2. Special hazards arising from the substance or mixture

Specific hazards during firefighting Contains substances that may result in explosion caused by heat. The product decomposes in an explosive way from 60°C. The products of decomposition must be considered as potentially dangerous and precautions must be taken in consequences (mix of benzene, benzoic acid, biphenyl, phenyl benzoate, carbon dioxide).

5.3. Advice for firefighters

Special protective equipment for firefighting. Wear full firefighting protective clothing and self-contained breathing apparatus. Use water spray to keep fire-exposed containers cool. Do not allow fire extinguishing water to contaminate surface or groundwater systems.

Further information Extinguish a small fire with powder or carbon dioxide then apply water to prevent re-ignition, containers and equipment located near the fire should be cooled with water; water used to extinguish fire should not get into the sewer system and waterways.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear protective clothing, protective gloves, eye protection and face. Do not let to contaminate the peroxide into drains and ground water; avoid hot, contact with combustible materials and flammable substances.

6.2. Environmental precautions

Do not let enter drains, surface and ground water and soil.

6.3. Methods and material for containment and cleaning up

Protect drains. Collect material into sealable plastic containers and transported to the disposal site. Waste should NOT be closed.

Reference to other sections

See section 8 for information on personal protection equipment.

See section 13 for disposal information.

SECTION 7: Handling and storage

7.1. Precautions on safe handling

Weigh at temperature below than +25°C, do not mix directly with reducing agents, promoters, etc. Do not shake, do not throw, etc. Do not eat, drink or smoke in the production and storage. After work, wash your hands every time. Keep work clothing separately and do not take home. Do not use tools that cause sparks.

7.2. Conditions for safe storage, including any incompatibilities

Keep away from sources of ignition, heat, light, at a temperature below +30°C.

Do not smoke, before and after contact with the peroxide wash your hands thoroughly; Only use of a suitable tool material (polyethylene, polypropylene, stainless steel).

7.3. Specific and uses

No information about other applications than the udder in subsection 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Regulation of the Minister of Labor and Social Policy of 12 June 2018 on the highest allowable concentrations and intensities of agents harmful to health in the work environment (Journal of Laws of 2018, item 1286 of 3 July 2018)

Dibenzoyl peroxide

NDS – 5 mg/m³

NDSCH – 10 mg/m³

TWA – 5 mg/m³

DNEL for workers (Chronic exposure by inhalation systemic) 39 mg/m³.

DNEL for workers (dermal chronic, systemic): 13,3 mg / kg body weight / day

DNEL for workers (dermal chronic, local): 34 µg/cm²

Dicyclohexyl phthalate

NDS: not determined.

NDSCh: not determined

DNEL for employee (chronic exposure by inhalation, systemic): 35.2 mg/m³

DNEL for workers (dermal chronic, systemic): 0.5 mg/kg/day

DNEL general population (chronic exposure by inhalation, systemic): 0.87 mg/m³

DNEL general population (chronic exposure through the skin, systemic): 0.25 mg/kg/day

DNEL general population (chronic oral, systemic): 0.25 mg/kg/day

Silicon dioxide obtained by chemical transformation

total dust – NDS - 10 mg/m³

respirable dust- NDS - 2 mg/m³

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Make sure that working area is well ventilated. Explosion proof ventilation is recommended.

8.2.2. Individual protection measure, such as personal protective equipment a

Eye/face protection	Use safety goggles or face protection from plexiglass.
Skin protection	Use appropriate protective antistatic clothing.
Hand protection	Use appropriate protective gloves of synthetic rubber like neoprene or butyl-rubber (thickness: 0.5 mm, rupture time > 8h).
Respiratory protection	Use short duration filter unit: Filter A
Thermal hazards	in normal work condition no thermal hazard.
Hygiene at the work	General regulations on hygiene. Do not allow them to cross in the workplace environment, regulatory exposure limits. After working Remove contaminated clothing - not to take home. Do not eat, drink or smoke in the production and storage facilities. After work, wash your hands each time.

8.2.3. Environmental exposure controls

Protect against the introduction into the municipal water and sewage system and watercourses.

Dibenzoyl peroxide:

PNEC freshwater: 0.02 µg / l

PNEC sea water: 0.002 µg / l

PNEC sediment-freshwater: 0.013 mg / kg

PNEC sediment-sea water: 0.001 mg / kg

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PNEC soil: 0.002 mg / kg soil

PNEC STP: 0.35 mg / l

Dicyclohexyl phthalate:

PNEC: freshwater water: 0.00362 mg/l

PNEC sea water: 0.000362 mg/l

PNEC periodic release: 0.0362 mg/l

PNEC sediment- see water: 1.06 mg/kg.

PNEC soil: 0.21 mg/kg

PNEC STP: 10 mg/

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance- Colour - Odour	Solid. Powdery – White - faint odour
pH	Ca. 7
Boiling Point [°C]	Not determined.
Flash point	Not determined.
Evaporate Rate	Not determined.
Solubility in water	Insoluble
Flammable limits	Not applicable.
Vapour pressure	Not applicable.
Relative vapour density (related to air)	630kg/ m3
Gravity	620 kg/m3 - 20°C
Partition coefficient (n-octanol/water)	Not determined.
Auto ignition temperature	Not determined.
Decomposition temperature	+55°C
Viscosity	Not applicable.
Explosive properties	One component (benzoyl peroxide is explosive)
Oxidising properties	Organic peroxide

9.2. Other information

Active oxygen content: 3.24 – 3.47%

SECTION 10: Stability and reactivity

10.1. Reactivity

sensitive to exothermic decomposition, decomposition is initiated by heat, contact with impurities (e.g. acids, heavy metal compounds, amines), friction or impact.

10.2. Chemical stability

under heat rapidly disintegrate.

10.3. Possibility of hazardous reactions

SADT (self accelerating decomposition temperature) possible at temperature above approximately +55°C, vapour may form explosive mixtures with air.

10.4. Conditions to avoid

Avoid high temperatures, light, pollution, rust.

10.5. Incompatible materials

Avoid contact with rust, copper, heavy metals, strong oxidizing agents, strong acids and strong bases

10.6. Hazardous decomposition products

hydrocarbons, derivatives of benzoic acid, irritating, corrosive, flammable gases may be formed in a fire or decomposition.

SECTION 11: Toxicological information**11.1. Information on toxicological effects**

The mixture was not tested, application of the conventional method from different substances which compose it.

Acute Toxicity

Chemical name:	DIBENZOYL PEROXIDE Oral: no adverse effect observed DNEL: 2000 mg/kg bw; LD50(mouse): > 2000 mg/kg Dermal: no study available
Skin corrosion/irritation: Serious eye damage/irritation:	No adverse effect observed – not irritant Adverse effect observed – irritant
Respiratory or skin sensitisation:	Adverse effect observed – cause sensitisation by skin contact
Germ cell mutagenicity: Carcinogenicity:	In vitro/in vivo - no adverse effect observed (negative result) Oral, skin -no relevant information available Inhalation – no data available
Reproductive toxicity: STOT – single exposure STOT – repeated exposure Repeated dose toxicity	No data available Not classified based on available information Not classified based on available information Not classified for repeated dose toxicity oral: adverse effect observed NOAEL: 200 mg/kg bw/day (rat, chronic) skin (systemic): no adverse effect observed NOAEL: 833 mg/kg bw/day (rat, chronic) skin (local): adverse effect observed NOAEL: 0.17 mg/cm ² (mouse, chronic) Inhalation (systemic, local): no data available
Aspiration hazard	Not classified based on available information.

Chemical name:	DICYCLOHEXYL PHTHALATE
Acute toxicity:	LD50 (rat):> 2000 mg / kg
Skin corrosion/irritation: Serious eye damage/irritation:	Not present – not classified Eyes – slight irritation – not classified
Respiratory or skin sensitisation:	Possible sensitization by skin contact
Germ cell mutagenicity: Carcinogenicity:	Does not occur Does not occur
Reproductive toxicity: STOT – single exposure STOT – repeated exposure Repeated dose toxicity Aspiration hazard	may damage the unborn child rat 240 ppm NOAEL No data available No data available NOAEL rat, 50 mg/kg bw./day No data available

Acute toxicity:	SILICON DIOXIDE OBTAINED BY CHEMICAL TRANSFORMATION oral - LD50 (rat):> 10000 mg / kg inhalation - LC0 (rat, 4h): 0.139 mg / l skin - LC50(rabbit): > 5000 mg / kg
Skin corrosion/irritation: Serious eye damage/irritation:	Not present – not classified Not present – not classified
Respiratory or skin sensitisation:	Not present – not classified
Germ cell mutagenicity: Carcinogenicity:	Does not occur Does not occur

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Reproductive toxicity:	Does not occur
STOT – single exposure	No data available
STOT – repeated exposure	No data available
Repeated dose toxicity	No data available
Aspiration hazard	No data available

SECTION 12: Ecological information

The mixture was not tested, application of the conventional method from different substances which compose it.

12.1. Toxicity

Substance(s)			EC50	CL50	LC50	Species
Dibenzoyl peroxide - factor M = 10	NOEC	0.110 mg/l	0.0765 mg/l		0.110 mg/l	Daphnia magna (48h)
	NOEC	0.0602 mg/l	0.0602 mg/l			Fish (96h)
	NOEC	0.0711 mg/l	0.0711 mg/l			Algae (72h)
	NOEC	35 mg/l	35 mg/l			Bacteria (0.5h)
Dicyclohexyl Phthalate			2mg/l acute toxic			Daphnia magna (48h)
	NOEC	0.679 mg/l chronic toxic				Daphnia magna (21 days)
					>2 mg/l	Fish (96h)
					0.06mg/l	Algae (72h)

12.2. Persistence and degradability

DIBENZOYL PEROXIDE:

It is hydrolytically unstable under basic conditions, acidic and neutral. Benzoic acid is the major compound produced by the decomposition during hydrolysis.

DICYCLOHEXYL PHTHALATE:

readily biodegradable - 91% - 28 days

12.3. Bioaccumulative potential

DIBENZOYL PEROXIDE:

Log Kow = 3.2 indicates a low probability of bioaccumulation; readily biodegradable

DICYCLOHEXYL PHTHALATE:

Potential low

Ig Pow 4.82 (25oC)

BCF: 85 – 90

12.4. Mobility in soil

DIBENZOYL PEROXIDE:

Koc = 6310 at temp. 20oC

DICYCLOHEXYL PHTHALATE:

substance is insoluble

log Koc=3.46 w temp. 20oC

12.5. Results of PBT and vPvB assessment

This product does not contain any BPT or vPvB substance

12.6. Other adverse effects

No data available.


SECTION 13: Disposal considerations

13.1. Waste treatment methods

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Spilled products collect for recycling. The product expired - for recycling. Waste code 16 03 05* "organic wastes containing dangerous substances". The product may be disposed of by incineration. Burning should be done in a location away from buildings and industrial facilities in a specialized furnace to burn waste chemicals. Packaging of the product be disposed of as hazardous waste code 15 01 10* "Packaging containing residues of or contaminated by dangerous ..."

SECTION 14: Transport information

	ADR / RID	IMDG	IATA
14.1 N° ONU	3106		
14.2 UN proper shipping name	PEROXYDE ORGANIQUE de type D, solide (Dibenzoyl peroxyde)		
14.3 Transport hazard classe label	5.2 		
14.4 Packing Group	Non-applicable	Non-applicable	Non-applicable
14.5 Dangerous for Environment	Yes	Yes	Yes
14.6 Special precautions for users	Tunnel restriction : D Limited quantities: 500g	Limited quantities :500g	
14.7 Transport in bulk (annexe II MARPOL 73/78 ans IBC code)	Not authorized for carriage in bulk		

SECTION 15: Regulatory information

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

Regulation No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

Regulation (EC) No 1272/2008 on the classification, labelling and packaging of substances and mixtures (CLP Regulation).

European Agreement Concerning the International Carriage of Dangerous Goods by Road, 2019

Candidate List SVHC, updated on 16/01/2020:

There is the component of the mixture on the list - Dicyclohexyl phthalate CAS: 84-61-7

15.2 Chemical safety assessment

Data not available.

SECTION 16: Other information

Relevant H & R phrases from section 3

H241 Heating may cause a fire or explosion

H317 May cause an allergic skin reaction

H319 Irritating to eyes

H360D May damage the unborn child

H400 Very toxic to aquatic organisms

H410 Very toxic to aquatic life with long lasting effects

H412 Harmful to aquatic life with long lasting effects

Abbreviations and acronyms

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Explanation of abbreviations / acronyms

BCF – Bio Concentration Factor

DNEL - derived dose level (concentration) at which no observed adverse effect level [mg/kg, mg/l]

PNEC - predicted concentrations do not cause changes in the environment [mg/kg, mg/l]

NOEC - the highest dose, or concentration of a toxic substance at which no adverse effect is observed in its operation.

NOAEL - no observable adverse effect level

NDS Exposure Limit - the average weighted concentration, the impact on the employee, during an 8-hour daily and average weekly working time laid down in the Labour Code, the period of its activity should not cause negative changes in its state of health and in the health of future generations.

NDSch - Maximum Acceptable Concentrations Momentarily - the average concentration that should not cause adverse changes in the health of the worker, whether in the workplace no longer than 15 minutes and not more than two times during the work shift, with an interval of not less than one hour.

Training: Those involved in trading a hazardous substance should be trained in the handling, safety and hygiene.

Drivers should be trained and obtain proper certification in accordance with the requirements of ADR.

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