

Safety Data Sheet

According to Regulation EC No. 1907/2006

MEKP-Härter 50/Butanox M-50

Date of issue/Date of revision: 22.06.2021

en / GB - Version 1.3

1. Identification of the substance/preparation and of the company/undertaking**1.1 Identification of the substance or preparation:**

MEKP-Härter 50/Butanox M-50

1.2 Use of the substance/preparation:

Curing agent

1.3 Company/undertaking identification

Company name: Gößl + Pfaff GmbH
 Street: Münchener Str. 13
 Place: 85123 Karlskron/Brautlach
 Telephone: +49 (0) 8450 / 932-0
 Fax.: +49 (0) 8450 / 932-13
 Contact person: Management: Mr. Gößl, Mr. Pfaff
 E-Mail: info@goessl-pfaff.de
 Internet: www.goessl-pfaff.de
 Responsible Department: Management

1.4 Emergency telephone**Emergency CONTACT (24-Hour-Number): GBK GmbH +49 (0) 6132-84463****2. Hazards identification****2.1 Classification of the substance or mixture****Classification (REGULATION (EC) No 1272/2008)**

Organic Peroxides D H242
 Acute toxicity 4 H302
 Acute toxicity 4 H332
 Skin corrosion 1B H314
 Serious eye damage 1 H318

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

2.2 Label elements**Labelling (REGULATION (EC) No 1272/2008)****Pictogram:****Signal word: Danger****Hazard statements**

H242 Heating may cause a fire.
 H302+H332 Harmful if swallowed or if inhaled.
 H314 Causes severe skin burns and eye damage.

Precautionary statements:**Prevention:**

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P234 Keep only in original packaging.
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
 P305+P351+P338+P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
 P370+P378 In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide to extinguish.

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Hazardous components which must be listed on the label:Methyl ethyl ketone peroxide; Reaction mass of butane- 1338-23-4
2,2-diyl dihydroperoxide and di-sec-butylhexaoxidane**2.3 Other hazards**

No further data available.

PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

3. Composition/information on ingredients**3.1 Substances**

Pure substance/mixture: Substance

Hazardous substance

Chemical name	PBT vPvB OEL	CAS-No. EG-No. REACH No.	Classification (REGULATION (EC) No. 1272/2008)	Concentration [%]
Methyl ethyl ketone peroxide; Reaction mass of butane-2,2-diyl dihydroperoxide and di-sec- butylhexaoxidane		1338-23-4 215-661-2 01-2119514691-43	Org. Perox. A; H240 Acute Tox. 4; H302 Acute Tox. 4; H332 Skin Corr. 1B; H314 Eye Dam. 1; H318	30 – 37
Methyl ethyl ketone		78-93-3 201-159-0	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336	1 – 5

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

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).

Status: Not applicable

4. First aid measures**4.1 Description of first aid measures****General advice**

Immediate medical attention is required. Move out of dangerous area.

Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. Consult a physician after significant exposure.

In case of skin contact

Take off contaminated clothing and shoes immediately.

Rinse immediately with plenty of water.

Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty.

In case of eye contact

Rinse with plenty of water.

Get medical attention immediately. Continue to rinse during transport.

Remove contact lenses.

Protect unharmed eye.

Keep eye wide open while rinsing.

Small amounts splashed into eyes can cause irreversible tissue damage and blindness.

If swallowed

Clean mouth with water and drink afterwards plenty of water.

Never give anything by mouth to an unconscious person.

Take victim immediately to hospital.

Do not induce vomiting! May cause chemical burns in mouth and throat.

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4.2 Most important symptoms and effects, both acute and delayed

Symptoms

The symptoms and effects are as expected from the hazards as shown in section 2.

No specific product related symptoms are known.

Risks

Harmful if swallowed or if inhaled.

Causes serious eye damage.

Causes severe burns.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment

Treat symptomatically.

5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting / Specific hazards arising from the chemical

CAUTION: re-ignition may occur.

Supports combustion.

Water spray may be ineffective unless used by experienced firefighters.

Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous decomposition products formed under fire conditions.

Combustion products

Fire will produce smoke containing hazardous combustion products (see section 10).

5.3 Advice for firefighters

Special protective equipment for firefighters

In the event of fire, wear self-contained breathing apparatus.

Further information

Use water spray to cool unopened containers.

Collect contaminated fire extinguishing water separately.

This must not be discharged into drains.

Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions

Use personal protective equipment.

Wear respiratory protection.

Ensure adequate ventilation.

Remove all sources of ignition.

Beware of vapours accumulating to form explosive concentrations.

Vapours can accumulate in low areas.

Emergency measures on accidental release

Evacuate personnel to safe areas.

Only qualified personnel equipped with suitable protective equipment may intervene.

Prevent unauthorised persons entering the zone.

6.2 Environmental precautions

Environmental precautions

Prevent product from entering drains.

If the product contaminates rivers and lakes or drains inform respective authorities.

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6.3 Methods and materials for containment and cleaning up

Methods for cleaning up / Methods for containment

Soak up with inert absorbent material and dispose of as hazardous waste.

Keep wetted with water.

Confinement must be avoided.

Never return spills in original containers for re-use.

6.4 Reference to other sections

For disposal considerations see section 13.

For personal protection see section 8.

7. Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

For personal protection see section 8.

Avoid formation of aerosol.

Do not breathe vapours or spray mist.

Smoking, eating and drinking should be prohibited in the application area.

Provide sufficient air exchange and/or exhaust in work rooms.

Open drum carefully as content may be under pressure.

Dispose of rinse water in accordance with local and national regulations.

Advice on protection against fire and explosion

Use explosion-protected equipment.

Keep away from sources of ignition - No smoking.

No sparking tools should be used.

Keep away from reducing agents (e.g. amines), acids, alkalies and heavy metal compounds (e.g. accelerators, driers, metal soaps).

Do not cut or weld on or near this container even when empty.

Keep away from combustible material.

Temperature class

It is recommended to use electrical equipment of temperature group T3.

However, auto-ignition can never be excluded.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers

No smoking. Keep in a well-ventilated place.

Electrical installations/working materials must comply with the technological safety standards.

Keep only in original container.

Store away from other materials.

Advice on common storage

Hazard group OP 1b (Organic peroxides, BGV B4)

German storage class

Organic peroxides and self-reacting hazardous materials

Maximum storage temperature: 25 °C

Other data

Maximum storage temperature is for quality only.

7.3 Specific end use(s)

Specific use(s)

Consult the technical guidelines for the use of this substance/mixture.

8. Exposure controls/personal protection

8.1 Control parameters

Components with workplace control parameters

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Components	CAS-No.	Value	Control parameters	Update	Basis	Form of exposure
Methylethylketone	78-93-3	TWA	200 ppm 600 mg/m ³	2000-06-16	2000/39/EC	
	Further information:	Indicative				
		STEL	300 ppm 900 mg/m ³	2000-06-16	2000/39/EC	
	Further information:	Indicative				
		AGW	200 ppm 600 mg/m ³	2010-08-04	DE TRGS 900	
	Further information:	DFG: Senate commission for the review of compounds at the work place dangerous for the health (MAK-commission). EU: European Union (The EU has established a limit value: deviations in value and peak limit are possible) H: Skin absorption Y: When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child				

ACGIH: American Conference of Governmental Industrial Hygienists

AGW: Arbeitsplatzgrenzwert

BEI: Biological Exposure Index

MAC: Maximum Allowable Concentration

NIOSH: National Institute for Occupational Safety and Health

OEL: Occupational exposure limit

STEL: Short term exposure limit

TRGS: Technische Regel für Gefahrstoffe

TWA: Time Weighted Average

Occupational exposure limits of decomposition products

Decomposition products	CAS-No.	Value	Control parameters	Update	Basis	Form of exposure
Formic acid	64-18-6	TWA	5 ppm 9 mg/m ³	2006-02-09	2006/15/EC	
	Further information:	Indicative				
		AGW	5 ppm 9,5 mg/m ³	2006-01-01	DE TRGS 900	
	Further information:	DFG: Senate commission for the review of compounds at the work place dangerous for the health (MAK-commission). EU: European Union (The EU has established a limit value: deviations in value and peak limit are possible) Y: When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child				
Acetic acid	64-19-7	TWA	10 ppm 25 mg/m ³	1991-07-05	91/322/EEC	
	Further information:	Indicative In the Annex to Directive 91/322/EEC, the references to acetic acid, calcium dihydroxide, lithium hydride and nitrogen monoxide are deleted with effect from 21 August 2018				
		AGW	10 ppm 25 mg/m ³	2010-08-04	DE TRGS 900	
	Further information:	DFG: Senate commission for the review of compounds at the work place dangerous for the health (MAK-commission). EU: European Union (The EU has established a limit value: deviations in value and peak limit are possible) Y: When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child				
		TWA	10 ppm 25 mg/m ³	2017-02-01	2017/164/EU	
	Further information:	Indicative				

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		STEL	20 ppm 50 mg/m ³	2017-02-01	2017/164/EU	
	Further information:	Indicative				
Propion acid	79-09-4	TWA	10 ppm 31 mg/m ³	2000-06-16	2000/39/EC	
	Further information:	Indicative				
		STEL	20 ppm 62 mg/m ³	2000-06-16	2000/39/EC	
	Further information:	Indicative				
		AGW	10 ppm 31 mg/m ³	2011-04-12	DE TRGS 900	
	Further information:	DFG: Senate commission for the review of compounds at the work place dangerous for the health (MAK-commission). EU: European Union (The EU has established a limit value: deviations in value and peak limit are possible) Y: When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child				
Methylethylketone	78-93-3	TWA	200 ppm 600 mg/m ³	2000-06-16	2000/39/EC	
	Further information:	Indicative				
		STEL	300 ppm 900 mg/m ³	2000-06-16	2000/39/EC	
	Further information:	Indicative				
		AGW	200 ppm 600 mg/m ³	2010-08-04	DE TRGS 900	
	Further information:	DFG: Senate commission for the review of compounds at the work place dangerous for the health (MAK-commission). EU: European Union (The EU has established a limit value: deviations in value and peak limit are possible) H: Skin absorption Y: When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child				

Biological occupational exposure limits

Substance name	CAS-No.	Control parameters	Sampling time	Update
Methylethylketone	78-93-3	2-butanone: 2 mg/l (urine)	Immediately after exposure or after working hours	2015-11-06

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006

Substance name	End use	Exposure routes	Potential health effects	Value
Methyl ethyl ketone peroxide; Reaction mass of butane-2,2-diyl dihydroperoxide and di-sec- butylhexaoxidane	Consumers	Skin contact	Long-term systemic effects	0.54 mg/kg
	Consumers	Inhalation	Long-term systemic effects	0.41 mg/m ³
	Consumers	Ingestion	Long-term systemic effects	0.27 mg/kg
	Workers	Skin contact	Long-term systemic effects	1.08 mg/kg
Methyl ethyl ketone	Workers	Inhalation	Long-term systemic effects	1.9 mg/m ³
	Workers	Skin contact	Long-term systemic effects	600 mg/m ³
	Workers	Skin contact	Long-term systemic effects	1.161 mg/kg
	Consumers	Inhalation	Long-term systemic effects	106 mg/m ³
	Consumers	Skin contact	Long-term systemic effects	412 mg/kg
	Consumers	Ingestion	Long-term systemic effects	31 mg/kg

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Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006

Substance name	Environmental Compartment	Value
Methyl ethyl ketone peroxide; Reaction mass of butane-2,2-diyl dihydroperoxide and di-sec-butylhexaoxidane	Fresh Water	0.0056 mg/l
	Intermittent water	0.056 mg/l
	Marine water	0.00056 mg/l
	Fresh water sediment	0.19 mg/kg dry weight
	Marine water sediment	0.0019 mg/kg dry weight
	Sewage treatment plant	1.2 mg/l
	Soil	0.00231 mg/kg dry weight
Methyl ethyl ketone	Fresh Water	55.8 mg/l
	Marine water	55.8 mg/l
	Intermittent water	55.8 mg/l
	Sewage treatment plant	709 mg/l
	Fresh water sediment	284.74 mg/kg dry weight
	Marine water sediment	284.74 mg/kg dry weight
	Soil	22.5 mg/kg dry weight
	Oral	1.000 mg/kg food

8.2 Exposure controls

Engineering controls

Explosion proof ventilation recommended.

Effective exhaust ventilation system

Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment

Respiratory protection

In the case of vapour or aerosol formation use a respirator with an approved filter.

Filter A

Hand protection

Neoprene

Nitrile rubber

Breakthrough time is not determined for the product. Change gloves often!

butyl-rubber

Break through time: \geq 480 min

Glove thickness: 0,5 mm

The data about break through time/strength of material are standard values! The exact break through time/strength of material has to be obtained from the producer of the protective glove.

Eye protection

Tightly fitting safety goggles

Wear face-shield and protective suit for abnormal processing problems.

Skin and body protection

Protective suit

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

When using do not eat or drink.

When using do not smoke.

Wash hands before breaks and at the end of workday.

Environmental exposure controls

General advice

Prevent product from entering drains.

If the product contaminates rivers and lakes or drains inform respective authorities.

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9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance:

Form:	Liquid
Colour:	Clear, colourless
Odour:	Faint
Odour Threshold:	No data available.
pH:	Weakly acidic
Melting point:	No data available.

Boiling point/boiling range: Decomposes below the boiling point.

Flash point: Above the SADT value.
No flash point was obtained, but the product may release flammable vapour.

Evaporation rate: No data available.

Flammability (solid, gas): Not applicable.

Flammability (liquids): Decomposition products may be flammable.

Explosion limits:

Lower: No data available.

Upper: No data available.

Vapour pressure: 1 hPa at 84 °C

Relative vapour density: No data available.

Relative density: 1,180 at 20 °C

Bulk density: Not applicable.

Solubility in / miscibility with water:

at 20 °C partly miscible.

other solvents:

at 20 °C miscible with Phthalates.

Partition coefficient

(n-octanol/water): No data available.

Auto-ignition temperature: Test method not applicable.

Decomposition temperature: SADT (Self accelerating decomposition temperature) is the lowest temperature at which self-accelerating decomposition may occur with a substance in the packaging as used in transport. A dangerous self-accelerating decomposition reaction and, under certain circumstances, explosion or fire can be caused by thermal decomposition at and above the SADT. Contact with incompatible substances can cause decomposition below the SADT.

Self-Accelerating decomposition temperature (SADT):

60 °C

Viscosity:

Dynamic at 20 °C: 24 mPa·s

Kinematic at 20 °C: 20,34 mm²/s

Explosive properties: Not explosive.

Oxidizing properties: Not classified as oxidising.

9.2 Other information:

Active Oxygen: 8,8 – 9,0 %

Content Organic peroxides: 30 – 37 %

This safety datasheet only contains information relating to safety and does not replace any product information or product specification.

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10. Stability and reactivity

10.1 Reactivity

Stable under normal conditions.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid

Conditions to avoid

Confinement must be avoided.

Heat, flames and sparks.

10.5 Incompatible materials

Materials to avoid

Contact with the following incompatible materials will result in hazardous decomposition:

Acids and bases

Iron

Copper

Reducing agents

Heavy metals

Rust

Do not mix with peroxide accelerators, unless under controlled processing.

Use only stainless steel 316, PP, polyethylene or glass-lined equipment.

For queries regarding the suitability of other materials please contact the supplier.

10.6 Hazardous decomposition products

Hazardous decomposition products

Carbon oxides

Formic acid

Acetic acid

Propionic acid

Methyl ethyl ketone

Thermal decomposition

SADT (Self accelerating decomposition temperature) is the lowest temperature at which self-accelerating decomposition may occur with a substance in the packaging as used in transport. A dangerous self-accelerating decomposition reaction and, under certain circumstances, explosion or fire can be caused by thermal decomposition at and above the SADT. Contact with incompatible substances can cause decomposition below the SADT.

Self-Accelerating decomposition temperature (SADT): 60 °C

11. Toxicological information

11.1 Information on toxicological effects

Product information:

Acute toxicity

Harmful if swallowed or if inhaled.

Skin corrosion/irritation

Causes severe burns

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitisation

Respiratory sensitisation: Not classified based on available information.

Skin sensitisation: Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

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Carcinogenicity

Not classified based on available information.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Aspiration hazard

Not classified based on available information.

Further information

No further data available.

Test result**Acute oral toxicity**

LD50 Oral: 1.070 mg/kg

Species: rats

Method: OECD Test Guideline 401

Acute inhalation toxicity

LC50 (Rat): 1,5 mg/l

Exposure time: 4

Test atmosphere: dust/mist

Acute dermal toxicity

LD50: 4.000 mg/kg

Species: Rabbit

Method: OECD Test Guideline 402

Skin corrosion/irritation

Species: Rabbit

Result: Sub-category 1B

Classification: Category 1B

Method: Tested according to Annex V of Directive 67/548/EEC.

Serious eye damage/eye irritation

Species: Rabbit

Result: Risk of serious damage to eyes.

Classification: Risk of serious damage to eyes.

Method: Tested according to Annex V of Directive 67/548/EEC.

Toxicology data for the components:**Methyl ethyl ketone peroxide; Reaction mass of butane-2,2-diyl dihydroperoxide and di- sec-butylhexaoxidane****Acute toxicity:****Acute oral toxicity**

LD50: 1.017 mg/kg

Species: Rat

Acute inhalation toxicity

LC50 (Rat): 1,5 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Acute dermal toxicity

LD50: 4.000 mg/kg

Species: Rat

Skin corrosion/irritation

Result: Causes burns.

Serious eye damage/eye irritation

Result: Risk of serious damage to eyes.

Germ cell mutagenicity**Genotoxicity in vitro**

Ames test

Result: negative

Genotoxicity in vivo

Not classified due to data which are conclusive although insufficient for classification.

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Carcinogenicity

No data available

Reproductive toxicity/Fertility

Species: Rat, male and female

Application

Route: Oral

Dose: 0, 25, 50, 75 milligram per kilogram

General Toxicity - Parent: No observed adverse effect level: 50 mg/kg bw/day

General Toxicity F1: No observed adverse effect level F1: 50 mg/kg bw/day

Fertility: No observed adverse effect level Parent: 75 mg/kg bw/day

Method: OECD Test Guideline 421

GLP: yes

STOT - repeated exposure

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration hazard

No aspiration toxicity classification

Methyl ethyl ketone**Acute toxicity:****Acute oral toxicity**

LD50: 2.737 mg/kg

Species: Rat

Acute dermal toxicity

LD50: 6.480 mg/kg

Species: Rabbit

Skin corrosion/irritation

Result: Repeated exposure may cause skin dryness or cracking.

Moderately irritating.

Serious eye damage/eye irritation

Result: Irritating to eyes.

STOT - single exposure

Exposure routes: Inhalation

The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.

Aspiration hazard

No aspiration toxicity classification

12. Ecological information**Product information:****Ecotoxicology Assessment****Additional ecological information**

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Toxic to aquatic life.

12.1 Toxicity**Test result****Toxicity to fish**

LC50: 44,2 mg/l

Exposure time: 96 h

Species: Poecilia reticulata (guppy)

Test Type: semi-static test

Toxicity to daphnia and other aquatic invertebrates

39 mg/l

Exposure time: 48 h

Species: Daphnia magna (Water flea)

Test Type: Immobilization

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Toxicity to algae

ErC50: 5,6 mg/l

Exposure time: 72 h

Species: Pseudokirchneriella subcapitata (algae)

Test Type: Growth inhibition

Toxicity to bacteria

EC10: 12 mg/l

Exposure time: 0,5 h

Species: activated sludge

Test Type: Respiration inhibition

Method: Domestic OECD Guideline 209

Components:

Test result

Methyl ethyl ketone peroxide; Reaction mass of butane-2,2-diyl dihydroperoxide and di- sec-butylhexaoxidane

Toxicity to fish

LC50: 44,2 mg/l

Exposure time: 96 h

Species: Poecilia reticulata (guppy)

Test Type: semi-static test

Toxicity to daphnia and other aquatic invertebrates

39 mg/l

Exposure time: 48 h

Species: Daphnia magna (Water flea)

Test Type: Immobilization

Toxicity to algae

ErC50: 5,6 mg/l

Exposure time: 72 h

Species: Pseudokirchneriella subcapitata (algae)

Test Type: Growth inhibition

Toxicity to bacteria

EC10: 12 mg/l

Exposure time: 0,5 h

Species: activated sludge

Test Type: Respiration inhibition

Method: Domestic OECD Guideline 209

Methyl ethyl ketone

Toxicity to fish

LC50: 3

220 mg/l

Exposure time: 96 h

Species: Lepomis macrochirus (Bluegill sunfish)

12.2 Persistence and degradability

Product information

No information available.

Components:

Methyl ethyl ketone peroxide; Reaction mass of butane-2,2-diyl dihydroperoxide and di- sec-butylhexaoxidane

Biodegradability

Result: Readily biodegradable.

Method: Closed Bottle test

Methyl ethyl ketone

Biodegradability:

Result: Readily biodegradable.

12.3 Bioaccumulative potential

Product information

No information available.

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Components:**Methyl ethyl ketone peroxide; Reaction mass of butane-2,2-diyl dihydroperoxide and di- sec-butylhexaoxidane****Bioaccumulation**

Bioconcentration factor (BCF): 10,3

Not expected considering the low log Pow value.

12.4 Mobility in soil**Product information**

No information available.

12.5 Results of PBT and vPvB assessment**Product information:****PBT and vPvB assessment**

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects**Product information**

No information available.

13. Disposal considerations**13.1 Waste treatment methods****Product**

The product should not be allowed to enter drains, water courses or the soil.

Do not contaminate ponds, waterways or ditches with chemical or used container.

Hazardous waste

Dispose of contents/container in accordance with local regulation.

Contaminated packaging

Empty remaining contents.

Dispose of as unused product.

Do not burn, or use a cutting torch on, the empty drum.

Due to the high risk of contamination recycling/recovery is not recommended.

Follow all warnings even after the container is emptied.

14. Transport information**14.1 UN-Nummer****ADN, ADR, RID, IMDG-Code, IATA-DGR**

UN3105

14.2 Proper shipping name**ADN, ADR, RID, IMDG-Code, IATA-DGR**ORGANIC PEROXIDE TYPE D, LIQUID
(Methyl ethyl ketone peroxide)**14.3 Transport hazard class****ADN, ADR, RID, IMDG-Code, IATA-DGR:**

5.2

14.4 Packing group**ADN:**

Packing group:

Not assigned.

Classification Code:

P1

Labels:

5.2

ADR:

Packing group:

Not assigned.

Classification Code:

P1

Labels:

5.2

Tunnel restriction code:

(D)

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RID:

Packing group: Not assigned.
 Classification Code: P1
 Hazard Identification Number: 539
 Labels: 5.2

IMDG-Code:

Packing group: Not assigned.
 Labels: 5.2
 EmS Code: F-J, S-R

IATA-DGR:

Packing instruction (cargo aircraft): 570
 Packing instruction (passenger aircraft): 570
 Packing group: Not assigned.
 Labels: 5.2 (HEAT)

14.5 Environmental hazards**ADN, ADR, RID, IATA-DGR****Environmentally hazardous**

no

IMDG-Code**Marine pollutant**

no

14.6 Special precautions for user

Not applicable

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

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

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

		Quantity 1	Quantity 2
P6b	SELF-REACTIVE SUBSTANCES AND ORGANIC PEROXIDES	50 t	200 t

Water Contaminating class (Germany): WGK 1 slightly water endangering
 Classification according to AwSV, Annex 1 (5.2)

TA Luft List (Germany): Total dust: Not applicable
 Inorganic substances in powdered form: Not applicable
 Inorganic substances in vapour or gaseous form: Not applicable
 Organic Substances: Not applicable
 Carcinogenic substances: Not applicable
 Mutagenic: Not applicable
 Toxic to reproduction: Not applicable

Notification status

TCSI: YES. On the inventory, or in compliance with the inventory
 TSCA: YES. All substances listed as active on the TSCA inventory
 AICS: YES. On the inventory, or in compliance with the inventory
 DSL: YES. All components of this product are on the Canadian DSL
 ENCS: YES. On the inventory, or in compliance with the inventory
 ISHL: YES. On the inventory, or in compliance with the inventory
 KECI: YES. On the inventory, or in compliance with the inventory
 PICCS: YES. On the inventory, or in compliance with the inventory
 IECSC: YES. On the inventory, or in compliance with the inventory
 NZIoC: YES. On the inventory, or in compliance with the inventory

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For explanation of abbreviation see section 16.

15.2 Chemical safety assessment

Methyl ethyl ketone peroxide; Reaction mass of butane-2,2-diyl dihydroperoxide and di-sec- butylhexaoxidane

A Chemical Safety Assessment has been carried out for this substance.

16. Other information

Changes in section(s): 3, 7, 8, 9, 15

Full text of H-Statements referred to under sections 2 and 3

H225	Highly flammable liquid and vapour.
H240	Heating may cause an explosion.
H242	Heating may cause a fire.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H336	May cause drowsiness or dizziness.

Full text of other abbreviations

2000/39/EC	Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values
2006/15/EC	Europe. Indicative occupational exposure limit values
2017/164/EU	Commission Directive (EU) 2017/164 establishing a fourth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC, and amending Commission Directives 91/322/EEC, 2000/39/EC and 2009/161/EU
91/322/EEC	Europe. Commission Directive 91/322/EEC on establishing indicative limit values
DE TRGS 900	Germany. TRGS 900 - Occupational exposure limit values.
2000/39/EC / TWA	Limit Value - eight hours
2000/39/EC / STEL	Short term exposure limit
2006/15/EC / TWA	Limit Value - eight hours
2017/164/EU / STEL	Short term exposure limit
2017/164/EU / TWA	Limit Value - eight hours
91/322/EEC / TWA	Limit Value - eight hours
DE TRGS 900 / AGW	Time Weighted Average

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways;
 ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road;
 AICS - Australian Inventory of Chemical Substances;
 ASTM - American Society for the Testing of Materials; bw - Body weight;
 CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008;
 CMR - Carcinogen, Mutagen or Reproductive Toxicant;
 DIN - Standard of the German Institute for Standardisation;
 DSL - Domestic Substances List (Canada);
 ECHA - European Chemicals Agency;
 EC-Number - European Community number;
 ECx - Concentration associated with x% response;
 ELx - Loading rate associated with x% response;
 EmS - Emergency Schedule;
 ENCS - Existing and New Chemical Substances (Japan);
 ErCx - Concentration associated with x% growth rate response;
 GHS - Globally Harmonized System;
 GLP - Good Laboratory Practice;
 IARC - International Agency for Research on Cancer
 IATA - International Air Transport Association;
 IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk;
 IC50 - Half maximal inhibitory concentration;
 ICAO - International Civil Aviation Organization;
 IECS - Inventory of Existing Chemical Substances in China;
 IMDG - International Maritime Dangerous Goods;
 IMO - International Maritime Organization;
 ISHL - Industrial Safety and Health Law (Japan);

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ISO - International Organisation for Standardization;
 KECI - Korea Existing Chemicals Inventory;
 LC50 - Lethal Concentration to 50 % of a test population;
 LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose);
 MARPOL - International Convention for the Prevention of Pollution from Ships;
 n.o.s. - Not Otherwise Specified;
 NO(A)EC - No Observed (Adverse) Effect Concentration;
 NO(A)EL - No Observed (Adverse) Effect Level;
 NOELR - No Observable Effect Loading Rate;
 NZIoC - New Zealand Inventory of Chemicals;
 OECD - Organization for Economic Co-operation and Development;
 OPPTS - Office of Chemical Safety and Pollution Prevention;
 PBT - Persistent, Bioaccumulative and Toxic substance;
 PICCS - Philippines Inventory of Chemicals and Chemical Substances;
 (Q)SAR - (Quantitative) Structure Activity Relationship;
 REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals;
 RID - Regulations concerning the International Carriage of Dangerous Goods by Rail;
 SADT - Self- Accelerating Decomposition Temperature;
 SDS - Safety Data Sheet;
 SVHC - Substance of Very High Concern;
 TCSI - Taiwan Chemical Substance Inventory;
 TRGS - Technical Rule for Hazardous Substances;
 TSCA - Toxic Substances Control Act (United States);
 UN - United Nations;
 VPvB - Very Persistent and Very Bioaccumulative

The information of this MSDS is based on the present state of our knowledge and meets the requirements of EU and national laws. The user's working conditions however, are beyond our knowledge and control. The product is not to be used for purposes other than those specified under Section 1 without a written permission. It remains the responsibility of the user to ensure that the necessary steps are taken to meet the laws and regulations. Handling of the product may only be done by people above 18 years of age, who are satisfactorily informed of how to do the work, the hazardous properties and necessary safety precautions. The information given in this MSDS is to describe the product only in terms of health and safety requirements and should not, therefore, be construed as guaranteeing specific properties.