

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

BENOX[®]C-30S



Version	Revision Date:	SDS Number:	Date of last issue: 08.02.2018
3.0	05.08.2020	600000000439	Date of first issue: 19.01.2017

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

1.1 Product identifier

Trade name : BENOX[®]C-30S

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

Use of the Sub-
stance/Mixture : Curing chemical

1.3 Details of the supplier of the safety data sheet

Company : United Initiators GmbH
Dr.-Gustav-Adolph-Str. 3
82049 Pullach

Telephone : +49 / 89 / 74422 – 0

E-mail address of person
responsible for the SDS : contact@united-in.com

1.4 Emergency telephone number

+49 / 89 / 74422 – 0 (24 h)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Organic peroxides, Type F	H242: Heating may cause a fire.
Eye irritation, Category 2	H319: Causes serious eye irritation.
Skin sensitisation, Category 1	H317: May cause an allergic skin reaction.
Reproductive toxicity, Category 1B	H360D: May damage the unborn child.
Short-term (acute) aquatic hazard, Category 1	H400: Very toxic to aquatic life.
Long-term (chronic) aquatic hazard, Category 1	H410: Very toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)


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Hazard pictograms	:	
Signal word	:	Danger
Hazard statements	:	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.
Precautionary statements	:	Prevention: P220 Keep/Store away from clothing/ strong acids, bases, heavy metal salts and other reducing substances /combustible materials. P233 Keep container tightly closed. P235 Keep cool. P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. P262 Do not get in eyes, on skin, or on clothing. P273 Avoid release to the environment. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. Response: P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308 + P313 IF exposed or concerned: Get medical advice/ attention. P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention. P337 + P313 If eye irritation persists: Get medical advice/ attention. P362 + P364 Take off contaminated clothing and wash it before reuse. P370 + P378 In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide to extinguish. Disposal: P501 Dispose of contents/ container to an approved waste disposal plant.

Hazardous components which must be listed on the label:

dicyclohexyl phthalate (CAS-No. 84-61-7)
Dibenzoyl peroxide (CAS-No. 94-36-0)

Additional Labelling

Restricted to professional users.

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2.3 Other hazards

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.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : Organic Peroxide
Solid mixture

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
dicyclohexyl phthalate	84-61-7 201-545-9 607-719-00-4 01-2119978223-34	Skin Sens. 1; H317 Repr. 1B; H360D Aquatic Chronic 3; H412	>= 30 - < 35
Dibenzoyl peroxide	94-36-0 202-327-6 617-008-00-0 01-2119511472-50-0006	Org. Perox. B; H241 Eye Irrit. 2; H319 Skin Sens. 1; H317 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 10 M-Factor (Chronic aquatic toxicity): 10	>= 25 - < 30

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.
Call a physician immediately.

Protection of first-aiders : First Aid responders should pay attention to self-protection and use the recommended protective clothing

If inhaled : If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.
If breathed in, move person into fresh air.

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- In case of skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Wash contaminated clothing before re-use.
If on skin, rinse well with water.
If on clothes, remove clothes.
If symptoms persist, call a physician.
- In case of eye contact : In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.
- If swallowed : Keep respiratory tract clear.
Call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed

- Risks : May cause an allergic skin reaction.
Causes serious eye irritation.
May damage the unborn child.

4.3 Indication of any immediate medical attention and special treatment needed

- Treatment : Treat symptomatically and supportively.
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SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media : Water spray jet
Alcohol-resistant foam
Carbon dioxide (CO₂)
Dry chemical
- Unsuitable extinguishing media : High volume water jet

5.2 Special hazards arising from the substance or mixture

- Specific hazards during fire-fighting : Contact with incompatible materials or exposure to temperatures exceeding SADT may result in a self-accelerating decomposition reaction with release of flammable vapors which may auto-ignite.
The product burns violently.
Flash back possible over considerable distance.
Vapours may form explosive mixtures with air.
The product will float on water and can be reignited on surface water.
Cool closed containers exposed to fire with water spray.

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5.3 Advice for firefighters

- Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary. Use personal protective equipment.
- Specific extinguishing methods : Do not use a solid water stream as it may scatter and spread fire.
Remove undamaged containers from fire area if it is safe to do so.
Use water spray to cool unopened containers.
- Further information : 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.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- Personal precautions : Use personal protective equipment.
Avoid dust formation.
Avoid breathing dust.
Remove all sources of ignition.
Follow safe handling advice and personal protective equipment recommendations.
Never return spills in original containers for re-use.
Treat recovered material as described in the section "Disposal considerations".

6.2 Environmental precautions

- Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and material for containment and cleaning up

- Methods for cleaning up : Contact with incompatible substances can cause decomposition at or below SADT.
Clear spills immediately.
Suppress (knock down) gases/vapours/mists with a water spray jet.
To clean the floor and all objects contaminated by this material, use plenty of water.
Soak up with inert absorbent material.
Isolate waste and do not reuse.
Non-sparking tools should be used.
Local or national regulations may apply to releases and dis-

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posal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.

6.4 Reference to other sections

For personal protection see section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

- Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.
- Advice on safe handling : Do not breathe vapours/dust.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
Take precautionary measures against static discharges.
Never return any product to the container from which it was originally removed.
Provide sufficient air exchange and/or exhaust in work rooms.
Avoid confinement.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Smoking, eating and drinking should be prohibited in the application area.
Wash thoroughly after handling.
For personal protection see section 8.
Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
Protect from contamination.
- Advice on protection against fire and explosion : Avoid dust formation. Provide appropriate exhaust ventilation at places where dust is formed. Keep away from heat and sources of ignition. Use only explosion-proof equipment. Keep away from combustible material.
- Hygiene measures : Keep away from food and drink. When using do not eat or drink. When using do not smoke. Wash hands before breaks and immediately after handling the product.

7.2 Conditions for safe storage, including any incompatibilities

- Requirements for storage areas and containers : Avoid impurities (e.g. rust, dust, ash), risk of decomposition. Electrical installations / working materials must comply with the technological safety standards. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store in original container. Keep containers tightly closed in a cool, well-ventilated place. Store in accordance with the particular national regulations.

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Advice on common storage : Keep away from strong acids, bases, heavy metal salts and other reducing substances.

Recommended storage temperature : < 30 °C

Further information on storage stability : No decomposition if stored normally.

7.3 Specific end use(s)

Specific use(s) : For further information, refer to the product technical data sheet.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Calcium carbonate	471-34-1	TWA (inhalable dust)	10 mg/m ³	GB EH40
Further information	For the purposes of these limits, respirable dust and inhalable dust are those fractions of airborne dust which will be collected when sampling is undertaken in accordance with the methods described in MDHS14/4 General methods for sampling and gravimetric analysis or respirable, thoracic and inhalable aerosols, The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg.m ⁻³ 8-hour TWA of inhalable dust or 4 mg.m ⁻³ 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed to dust above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limits., Most industrial dusts contain particles of a wide range of sizes. The behaviour, deposition and fate of any particular particle after entry into the human respiratory system, and the body response that it elicits, depend on the nature and size of the particle. HSE distinguishes two size fractions for limit-setting purposes termed 'inhalable' and 'respirable'. Inhalable dust approximates to the fraction of airborne material that enters the nose and mouth during breathing and is therefore available for deposition in the respiratory tract. Respirable dust approximates to the fraction that penetrates to the gas exchange region of the lung. Fuller definitions and explanatory material are given in MDHS14/4., Where dusts contain components that have their own assigned WEL, all the relevant limits should be complied with., Where no specific short-term exposure limit is listed, a figure three times the long-term exposure limit should be used.			
		TWA (Respirable dust)	4 mg/m ³	GB EH40
dicyclohexyl phthalate	84-61-7	TWA	5 mg/m ³	GB EH40

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Further information	Where no specific short-term exposure limit is listed, a figure three times the long-term exposure limit should be used.			
Dibenzoyl peroxide	94-36-0	TWA	5 mg/m ³	GB EH40
Further information	Where no specific short-term exposure limit is listed, a figure three times the long-term exposure limit should be used.			
Silicon dioxide	7631-86-9	TWA (inhalable dust)	6 mg/m ³ (Silica)	GB EH40
Further information	<p>For the purposes of these limits, respirable dust and inhalable dust are those fractions of airborne dust which will be collected when sampling is undertaken in accordance with the methods described in MDHS14/4 General methods for sampling and gravimetric analysis or respirable, thoracic and inhalable aerosols, The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg.m⁻³ 8-hour TWA of inhalable dust or 4 mg.m⁻³ 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed to dust above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limits., Most industrial dusts contain particles of a wide range of sizes. The behaviour, deposition and fate of any particular particle after entry into the human respiratory system, and the body response that it elicits, depend on the nature and size of the particle. HSE distinguishes two size fractions for limit-setting purposes termed 'inhalable' and 'respirable'. Inhalable dust approximates to the fraction of airborne material that enters the nose and mouth during breathing and is therefore available for deposition in the respiratory tract. Respirable dust approximates to the fraction that penetrates to the gas exchange region of the lung. Fuller definitions and explanatory material are given in MDHS14/4., Where dusts contain components that have their own assigned WEL, all the relevant limits should be complied with., Where no specific short-term exposure limit is listed, a figure three times the long-term exposure limit should be used.</p>			
		TWA (Respirable dust)	2.4 mg/m ³ (Silica)	GB EH40

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

Substance name	End Use	Exposure routes	Potential health effects	Value
Dibenzoyl peroxide	Workers	Inhalation	Long-term systemic effects	11.75 mg/m ³
	Workers	Skin contact	Long-term systemic effects	6.6 mg/kg bw/day
dicyclohexyl phthalate	Workers	Inhalation	Long-term systemic effects	35.2 mg/m ³
	Workers	Skin contact	Long-term systemic effects	0.5 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	0.87 mg/m ³
	Consumers	Skin contact	Long-term systemic effects	0.25 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	0.25 mg/kg bw/day
	Consumers	Ingestion	Acute systemic ef-	0.25 mg/kg

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Silicon dioxide	Workers	Inhalation	effects Long-term systemic effects	bw/day 4 mg/m ³
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Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
Dibenzoyl peroxide	Fresh water	0.000602 mg/l
	Marine water	< 0.0001 mg/l
	Intermittent use/release	0.000602 mg/l
	Sewage treatment plant	0.35 mg/l
	Fresh water sediment	0.338 mg/kg
	Soil	0.0758 mg/kg
dicyclohexyl phthalate	Oral	6.67 mg/kg
	Fresh water	0.036 mg/l
	Marine water	0 mg/l
	Sewage treatment plant	10 mg/l
	Fresh water sediment	1.06 mg/kg dry weight (d.w.)
	Marine sediment	0.106 mg/kg dry weight (d.w.)

8.2 Exposure controls

Engineering measures

Minimize workplace exposure concentrations.

Personal protective equipment

Eye protection : Tightly fitting safety goggles
Please wear suitable protective goggles. Also wear face protection if there is a splash hazard.
Ensure that eyewash stations and safety showers are close to the workstation location.

Hand protection

Material : butyl-rubber
Break through time : 480 min
Glove thickness : 0.5 mm

Material : Nitrile rubber
Break through time : 480 min
Glove thickness : 0.4 mm

Remarks : Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.

Skin and body protection : Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.

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Respiratory protection : In the case of dust or aerosol formation use respirator with an approved filter.

Filter type : Filter type P

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	:	powder
Colour	:	white
Odour	:	aromatic
Odour Threshold	:	No data available
pH	:	No data available
Melting point/range	:	Decomposition: Decomposes below the melting point.
Boiling point/boiling range	:	Not applicable
Flash point	:	Not applicable
Flammability (solid, gas)	:	Not applicable
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	No data available
Density	:	No data available
Solubility(ies)	:	
Water solubility	:	insoluble
Viscosity	:	
Viscosity, dynamic	:	Not applicable
Viscosity, kinematic	:	Not applicable
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing. Organic peroxide

9.2 Other information

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Self-Accelerating decomposition temperature (SADT)	: 55 °C
	Method: UN-Test H.4
	SADT-Self Accelerating Decomposition Temperature. Lowest temperature at which the tested package size will undergo a self-accelerating decomposition reaction.

SECTION 10: Stability and reactivity

10.1 Reactivity

Stable under recommended storage conditions.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : Dust may form explosive mixture in air.

10.4 Conditions to avoid

Conditions to avoid : Protect from contamination.
Contact with incompatible substances can cause decomposition at or below SADT.
Heat, flames and sparks.
Avoid confinement.

10.5 Incompatible materials

Materials to avoid : Accelerators, strong acids and bases, heavy metals and heavy metal salts, reducing agents

10.6 Hazardous decomposition products

Irritant, caustic, flammable, noxious/toxic gases and vapours can develop in the case of fire and decomposition

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Not classified based on available information.

Components:

dicyclohexyl phthalate:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 423
Assessment: The substance or mixture has no acute oral toxicity

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 402

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Assessment: The substance or mixture has no acute dermal toxicity

Dibenzoyl peroxide:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 401
Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity : LC50 (Rat): > 24.3 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: OECD Test Guideline 403
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : Remarks: No data available

Skin corrosion/irritation

Not classified based on available information.

Product:

Remarks : May cause skin irritation in susceptible persons.

Components:

dicyclohexyl phthalate:

Result : No skin irritation

Dibenzoyl peroxide:

Species : Rabbit
Result : No skin irritation

Serious eye damage/eye irritation

Causes serious eye irritation.

Product:

Remarks : Product dust may be irritating to eyes, skin and respiratory system.

Components:

dicyclohexyl phthalate:

Result : No eye irritation

Dibenzoyl peroxide:

Species : Rabbit
Result : Irritation to eyes, reversing within 7 days

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Respiratory or skin sensitisation

Skin sensitisation

May cause an allergic skin reaction.

Respiratory sensitisation

Not classified based on available information.

Product:

Remarks : Causes sensitisation.

Components:

dicyclohexyl phthalate:

Exposure routes : Skin contact
Species : Mouse
Result : May cause sensitisation by skin contact.

Dibenzoyl peroxide:

Exposure routes : Skin contact
Species : Mouse
Method : Local lymph node assay (LLNA)
Result : May cause sensitisation by skin contact.

Germ cell mutagenicity

Not classified based on available information.

Components:

dicyclohexyl phthalate:

Genotoxicity in vitro : Result: negative
Remarks: In vitro tests did not show mutagenic effects

Genotoxicity in vivo : Remarks: No data available

Germ cell mutagenicity- Assessment :
Remarks: Based on harmonised classification in EU regulation 1272/2008, Annex VI

Dibenzoyl peroxide:

Genotoxicity in vitro : Result: negative
Remarks: In vitro tests did not show mutagenic effects

Genotoxicity in vivo : Result: negative
Remarks: In vivo tests did not show mutagenic effects

Carcinogenicity

Not classified based on available information.

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Components:

dicyclohexyl phthalate:

Remarks : This information is not available.

Carcinogenicity - Assessment :

Remarks: Based on harmonised classification in EU regulation 1272/2008, Annex VI

Dibenzoyl peroxide:

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

Reproductive toxicity

May damage the unborn child.

Components:

dicyclohexyl phthalate:

Reproductive toxicity - Assessment :

Clear evidence of adverse effects on development, based on animal experiments.

Remarks: Based on harmonised classification in EU regulation 1272/2008, Annex VI

Dibenzoyl peroxide:

Effects on fertility :

Species: Rat, male

Application Route: Oral

General Toxicity - Parent: NOAEL: 1,000 mg/kg body weight

Method: OECD Test Guideline 422

Species: Rat, female

Application Route: Oral

General Toxicity - Parent: NOAEL: 500 mg/kg body weight

Method: OECD Test Guideline 422

Reproductive toxicity - Assessment :

No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments.

STOT - single exposure

Not classified based on available information.

Components:

Dibenzoyl peroxide:

Exposure routes :

Ingestion

Assessment :

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

STOT - repeated exposure

Not classified based on available information.

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Components:

Dibenzoyl peroxide:

Exposure routes : Ingestion
Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Repeated dose toxicity

Components:

dicyclohexyl phthalate:

Species : Rat
NOAEL : 50 mg/kg
Application Route : Ingestion
Exposure time : 90 d
Method : OECD Test Guideline 408

Aspiration toxicity

Not classified based on available information.

Components:

Dibenzoyl peroxide:

No aspiration toxicity classification

Further information

Product:

Remarks : No data available

SECTION 12: Ecological information

12.1 Toxicity

Components:

dicyclohexyl phthalate:

Toxicity to fish : LC50 (Oryzias latipes (Orange-red killifish)): > 2 mg/l
Exposure time: 96 h
Remarks: No toxicity at the limit of solubility

Toxicity to daphnia and other aquatic invertebrates : NOEC (Daphnia magna (Water flea)): > 2 mg/l
Exposure time: 48 h
Remarks: No toxicity at the limit of solubility

Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): > 2 mg/l
Exposure time: 72 h
Test Type: Growth inhibition

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Method: OECD Test Guideline 201
Remarks: No toxicity at the limit of solubility

Toxicity to microorganisms : NOEC : > 100 mg/l
Exposure time: 3 h
Test Type: Respiration inhibition
Method: OECD Test Guideline 209

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0.181 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Method: OECD Test Guideline 211

Ecotoxicology Assessment

Chronic aquatic toxicity : Harmful to aquatic life with long lasting effects.

Dibenzoyl peroxide:

Toxicity to fish : EC50 (Oncorhynchus mykiss (rainbow trout)): 0.06 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.11 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): 0.06 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

M-Factor (Acute aquatic toxicity) : 10

Toxicity to microorganisms : EC50 (Bacteria): 35 mg/l

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : EC10: 0.001 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Test Type: semi-static test
Method: OECD Test Guideline 211

M-Factor (Chronic aquatic toxicity) : 10

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

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12.2 Persistence and degradability

Components:

dicyclohexyl phthalate:

Biodegradability : Result: Readily biodegradable.

Dibenzoyl peroxide:

Biodegradability : Result: Inherently biodegradable.

12.3 Bioaccumulative potential

Components:

dicyclohexyl phthalate:

Partition coefficient: n-octanol/water : log Pow: 4.82 (25 °C)

Dibenzoyl peroxide:

Partition coefficient: n-octanol/water : log Pow: 3.2 (20 °C)

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Product:

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:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Very toxic to aquatic life with long lasting effects.

SECTION 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.
Dispose of wastes in an approved waste disposal facility.

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Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.
Do not burn, or use a cutting torch on, the empty drum.
Dispose of in accordance with local regulations.

SECTION 14: Transport information

14.1 UN number

ADR	: UN 3110
RID	: UN 3110
IMDG	: UN 3110
IATA	: UN 3110

14.2 UN proper shipping name

ADR	: ORGANIC PEROXIDE TYPE F, SOLID (DIBENZOYL PEROXIDE)
RID	: ORGANIC PEROXIDE TYPE F, SOLID (DIBENZOYL PEROXIDE)
IMDG	: ORGANIC PEROXIDE TYPE F, SOLID (DIBENZOYL PEROXIDE)
IATA	: Organic peroxide type F, solid (Dibenzoyl peroxide)

14.3 Transport hazard class(es)

ADR	: 5.2
RID	: 5.2
IMDG	: 5.2
IATA	: 5.2

14.4 Packing group

ADR	
Packing group	: Not assigned by regulation
Classification Code	: P1
Hazard Identification Number	: 539
Labels	: 5.2
Tunnel restriction code	: (D)
RID	
Packing group	: Not assigned by regulation
Classification Code	: P1
Hazard Identification Number	: 539
Labels	: 5.2
IMDG	
Packing group	: Not assigned by regulation

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Labels	:	5.2
EmS Code	:	F-J, S-R
IATA (Cargo)		
Packing instruction (cargo aircraft)	:	570
Packing group	:	Not assigned by regulation
Labels	:	Division 5.2 - Organic peroxides, Handling Label - Keep Away From Heat
IATA (Passenger)		
Packing instruction (passenger aircraft)	:	570
Packing group	:	Not assigned by regulation
Labels	:	Division 5.2 - Organic peroxides, Handling Label - Keep Away From Heat

14.5 Environmental hazards

ADR

Environmentally hazardous : yes

RID

Environmentally hazardous : yes

IMDG

Marine pollutant : yes

14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

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

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59) : dicyclohexyl phthalate

REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable

Regulation (EC) No 850/2004 on persistent organic pollutants : Not applicable

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Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals : Not applicable

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) : Conditions of restriction for the following entries should be considered: dicyclohexyl phthalate (Number on list 30)

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 MIXTURES and ORGANIC PEROXIDES	50 t	200 t
E1	ENVIRONMENTAL HAZARDS	100 t	200 t

Other regulations:

Gefahrgruppe nach § 3 BGV B4: III (German regulatory requirements)

Take note of Directive 92/85/EEC regarding maternity protection or stricter national regulations, where applicable.

Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

The components of this product are reported in the following inventories:

- TCSI (TW) : On the inventory, or in compliance with the inventory
- TSCA (US) : All substances listed as active on the TSCA inventory
- AICS (AU) : On the inventory, or in compliance with the inventory
- DSL (CA) : All components of this product are on the Canadian DSL

- ENCS (JP) : On the inventory, or in compliance with the inventory
- ISHL (JP) : On the inventory, or in compliance with the inventory
- KECI (KR) : On the inventory, or in compliance with the inventory
- PICCS (PH) : On the inventory, or in compliance with the inventory

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IECSC (CN) : On the inventory, or in compliance with the inventory

15.2 Chemical safety assessment

This information is not available.

SECTION 16: Other information

Further information

Other information : This safety datasheet only contains information relating to safety and does not replace any product information or product specification.
These safety instructions also apply to empty packaging which may still contain product residues.

Sources of key data used to compile the Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>

Classification of the mixture:

Org. Perox. F	H242
Eye Irrit. 2	H319
Skin Sens. 1	H317
Repr. 1B	H360D
Aquatic Acute 1	H400
Aquatic Chronic 1	H410

Classification procedure:

Based on product data or assessment
Calculation method
Calculation method
Calculation method
Calculation method
Calculation method

Full text of H-Statements

H241	: Heating may cause a fire or explosion.
H317	: May cause an allergic skin reaction.
H319	: Causes serious eye irritation.
H360D	: May damage the unborn child.
H400	: Very toxic to aquatic life.
H410	: Very toxic to aquatic life with long lasting effects.
H412	: Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

Aquatic Acute	: Short-term (acute) aquatic hazard
Aquatic Chronic	: Long-term (chronic) aquatic hazard
Eye Irrit.	: Eye irritation
Org. Perox.	: Organic peroxides
Repr.	: Reproductive toxicity
Skin Sens.	: Skin sensitisation
GB EH40	: UK. EH40 WEL - Workplace Exposure Limits
GB EH40 / TWA	: Long-term exposure limit (8-hour TWA reference period)

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous

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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; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); 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; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The 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, unless specified in the text.

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