





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

- **1.1 Product identifier**
- **Trade name:** PEROXAN M64 AX
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture**
Reaction initiator
For industrial use
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:** PERGAN GmbH
Hilfsstoffe für industrielle Prozesse
Schlavenhorst 71
D-46395 Bocholt
Tel: +49 2871 9902-0
Fax: +49 2871 9902-50
- **Further information obtainable from:**
Environment protection / Security of labour
Competent person:
* Sales Manager Germany: Mr. Ansgar Pappenheim, e-mail: a.pappenheim@pergan.com
* Export Sales Manager: Mr. Dr. Thomas Philipps, e-mail: dr.philipps@pergan.com
* Environment protection / : Mr. Christoph Wilting, e-mail: c.wilting@pergan.com
Security of labour
- **1.4 Emergency telephone number:** - Tel: +49 2871 9902-0

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**

| | | |
|-------------------|-------|--|
| Org. Perox. D | H242 | Heating may cause a fire. |
| Acute Tox. 4 | H302 | Harmful if swallowed. |
| Skin Corr. 1B | H314 | Causes severe skin burns and eye damage. |
| Eye Dam. 1 | H318 | Causes serious eye damage. |
| Skin Sens. 1 | H317 | May cause an allergic skin reaction. |
| Repr. 2 | H361d | Suspected of damaging the unborn child. |
| STOT SE 3 | H335 | May cause respiratory irritation. |
| Aquatic Chronic 3 | H412 | Harmful to aquatic life with long lasting effects. |
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008** The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**

GHS02 GHS05 GHS07 GHS08
- **Signal word** Danger
- **Hazard-determining components of labelling:** Reaction mass of butane-2,2-diyl dihydroperoxide and di-sec-butylhexaoxidane
1-isopropyl-2,2-dimethyltrimethylene diisobutyrate
2,4-Pentanedione, peroxide
hydrogen peroxide solution
- **Hazard statements**

H242 Heating may cause a fire.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H361d Suspected of damaging the unborn child.
H335 May cause respiratory irritation.
H412 Harmful to aquatic life with long lasting effects.
- **Precautionary statements**

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P220 Keep away from dirt, rust, chemicals in particular concentrated acids, alkalis and accelerators (e. g. heavy metal compounds and amines).
P234 Keep only in original container.
P264 Wash thoroughly after handling.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/doctor.

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| | |
|-----------|---|
| P405 | Store locked up. |
| P410 | Protect from sunlight. |
| P411+P235 | Store at temperatures not exceeding +30°C. Keep cool. |
| P420 | Do not mix with peroxide-accelerators or reducing agents. |
| P501 | Dispose of contents/container in accordance with local/regional/national/international regulations. |

2.3 Other hazards

Results of PBT and vPvB assessment

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

3.2 Chemical characterisation: Mixtures

Dangerous components:

| | | |
|--|--|--------|
| CAS: 6846-50-0 EINECS: 229-934-9 Reg-No.: 01-2119451093-47 | 1-isopropyl-2,2-dimethyltrimethylene diisobutyrate Repr. 2, H361d; Aquatic Chronic 3, H412 | 30-40% |
| CAS: 123-42-2 EINECS: 204-626-7 Index number: 603-016-00-1 Reg-No.: 01-2119473975-21 | 4-hydroxy-4-methylpentan-2-one Flam. Liq. 3, H226; Eye Irrit. 2, H319; STOT SE 3, H335 | 20-25% |
| CAS: 1338-23-4 EC number: 700-954-4 Reg-No.: 01-2119514691-43 | Reaction mass of butane-2,2-diyl dihydroperoxide and di-sec-butylhexaoxidane Org. Perox. D, H242; Skin Corr. 1B, H314; Eye Dam. 1, H318; Acute Tox. 4, H302; Acute Tox. 4, H332 | 20-25% |
| CAS: 37187-22-7 EINECS: 253-384-9 | 2,4-Pentanedione, peroxide Org. Perox. D, H242; Eye Irrit. 2, H319; Skin Sens. 1, H317 | 5-10% |
| CAS: 7722-84-1 EINECS: 231-765-0 Index number: 008-003-00-9 Reg-No.: 01-2119485845-22 | hydrogen peroxide solution Ox. Liq. 1, H271; Skin Corr. 1A, H314; Acute Tox. 4, H302; Acute Tox. 4, H332; STOT SE 3, H335; Aquatic Chronic 3, H412 | 1-2.5% |
| CAS: 78-93-3 EINECS: 201-159-0 Index number: 606-002-00-3 Reg-No.: 01-2119457290-43 | butanone Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336 | 1-2.5% |
| CAS: 123-54-6 EINECS: 204-634-0 Index number: 606-029-00-0 Reg-No.: 01-2119458968-15 | pentane-2,4-dione Flam. Liq. 3, H226; Acute Tox. 3, H311; Acute Tox. 3, H331; Acute Tox. 4, H302 | 0.1-1% |

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information:

Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.



Take care of personal protection for the first aider.

After inhalation:

Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
Take affected persons into fresh air and keep quiet.

After skin contact:

Immediately wash with water and soap and rinse thoroughly.
Immediately remove contaminated clothing.

After eye contact:

Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing:

Call for a doctor immediately.
Drink plenty of water and provide fresh air. Call for a doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.


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SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **5.2 Special hazards arising from the substance or mixture**
Under certain fire conditions, traces of other toxic gases cannot be excluded.
Hydrocarbons, carbon dioxide and -monoxid.
- **5.3 Advice for firefighters**
- **Protective equipment:** Do not inhale explosion gases or combustion gases.
- **Additional information** Cool endangered receptacles with water spray.
Self-protection first!

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Keep away from ignition sources.
In case of further temperature should be cooled with waterspray from a safe distance.
Wear breathing apparatus with filter A during decomposition of materials.
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:**  Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
Large quantities should be diluted with suitable desensitisation agent to a concentration below 10 % before disposal.
Soak up with absorbant material (e. g. Vermiculit) and dispose of in accordance with government regulations.
- **6.4 Reference to other sections** See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.
In case of large spillage the environmental authority should be informed.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Keep away from heat and direct sunlight.
Open and handle receptacle with care.
Prevent formation of aerosols.
Wear suitable respiratory protective device when decanting larger quantities without extractor facilities.
Do not refill residue into storage receptacles.
Restrict the quantity stored at the work place.
Before break and at the end of work hands should be thoroughly washed.
Only use tools made of suitable materials (e. g. polyethylene or stainless steel).
Keep away from dirt, rust, chemicals in particular concentrated acids, alkalis and accelerators (e. g. heavy-metal compounds and amines).
Oxidizing because of releasing oxygene.
While using do not eat, drink or smoke.
Do not generate flames or sparks.
Keep product and emptied container away from heat and sources of ignition.
Avoid shock and friction.
Take precautionary measures against static discharges.
- **Information about fire - and explosion protection:**  Do not smoke.
Protect from heat.
Protect against electrostatic charges.
Prevent impact and friction.
Use explosion-proof apparatus / fittings and spark-proof tools.
Fumes can combine with air to form an explosive mixture.
-  Wear shoes with conductive soles.
Formation of flammable or explosive gas/air-mixtures is possible.
-  Avoid open flames, sparks, direct sunlight and other sources of ignition.

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Keep ignition sources away - Do not smoke.

7.2 Conditions for safe storage, including any incompatibilities

- **Storage:** Pay attention to the special requirements of your local authorities for storing dangerous goods.
- **Requirements to be met by storerooms and receptacles:**
 - Store only in the original receptacle.
 - Prevent any seepage into the ground.
 - Use only receptacles specifically permitted for this substance/product.
- **Information about storage in one common storage facility:** Do not store or park organic peroxide together with heavy metal compounds and amines. Store away from foodstuffs, drinks and feeding stuffs.
- **Further information about storage conditions:**
 - Keep container tightly sealed.
 - Protect from heat and direct sunlight.
 - Protect from contamination.
 - Store under lock and key and out of the reach of children.
- **Recommended storage temperature (To maintain quality):** 0 ... +30 °C
- **Storage class:** 5.2
- **7.3 Specific end use(s)** No further relevant information available.

* **SECTION 8: Exposure controls/personal protection**

- **Additional information about design of technical facilities:** No further data; see item 7.

8.1 Control parameters**Ingredients with limit values that require monitoring at the workplace:****123-42-2 4-hydroxy-4-methylpentan-2-one**

| | |
|---------------------|--|
| WEL (Great Britain) | Short-term value: 362 mg/m ³ , 75 ppm |
| | Long-term value: 241 mg/m ³ , 50 ppm |

7722-84-1 hydrogen peroxide solution

| | |
|---------------------|---|
| WEL (Great Britain) | Short-term value: 2.8 mg/m ³ , 2 ppm |
| | Long-term value: 1.4 mg/m ³ , 1 ppm |

78-93-3 butanone

| | |
|---------------------|---|
| WEL (Great Britain) | Short-term value: 899 mg/m ³ , 300 ppm |
| | Long-term value: 600 mg/m ³ , 200 ppm |
| | Sk, BMGV |
| IOELV (EU) | Short-term value: 900 mg/m ³ , 300 ppm |
| | Long-term value: 600 mg/m ³ , 200 ppm |

DNELs**6846-50-0 1-isopropyl-2,2-dimethyltrimethylene diisobutyrate**

| | | |
|------------|----------------------|----------------------------------|
| Dermal | DNEL Longterm System | 5 mg/kg bw/day (Worker) |
| Inhalative | DNEL Longterm System | 17.62 mg/m ³ (Worker) |

123-42-2 4-hydroxy-4-methylpentan-2-one

| | | |
|------------|----------------------|---------------------------------|
| Dermal | DNEL Longterm System | 840 mg/kg bw/day (Worker) |
| Inhalative | DNEL Longterm System | 59.2 mg/m ³ (Worker) |

1338-23-4 Reaction mass of butane-2,2-diyl dihydroperoxide and di-sec-butylhexaoxidane

| | | |
|------------|----------------------|----------------------------------|
| Dermal | DNEL Longterm System | 3 mg/kg bw/day (Worker) |
| Inhalative | DNEL Longterm System | 5.288 mg/m ³ (Worker) |

7722-84-1 hydrogen peroxide solution

| | | |
|------------|---------------------|--------------------------------|
| Inhalative | DNEL Longterm Local | 1.4 mg/m ³ (Worker) |
|------------|---------------------|--------------------------------|

78-93-3 butanone

| | | |
|------------|----------------------|--------------------------------|
| Dermal | DNEL Longterm System | 1,161 mg/kg bw/day (Worker) |
| Inhalative | DNEL Longterm System | 600 mg/m ³ (Worker) |

123-54-6 pentane-2,4-dione

| | | |
|------------|----------------------|-------------------------------|
| Dermal | DNEL Longterm System | 12 mg/kg bw/day (Worker) |
| Inhalative | DNEL Longterm System | 84 mg/m ³ (Worker) |

PNECs**6846-50-0 1-isopropyl-2,2-dimethyltrimethylene diisobutyrate**

| | |
|----------------------|------------------------|
| PNEC Marinewater sed | 0.529 mg/kg sed dw (-) |
| PNEC Freshwater | 0.014 mg/l (AF 50) |
| PNEC Freshwater sed | 5.29 mg/kg sed dw |

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| | |
|---|------------------------|
| PNEC Soil | 1.05 mg/kg soil dw |
| PNEC STP | 3 mg/l (AF 10) |
| PNEC Marinewater | 0.001 mg/l (AF 500) |
| 123-42-2 4-hydroxy-4-methylpentan-2-one | |
| PNEC Marinewater sed | 0.91 mg/kg sed dw |
| PNEC Freshwater | 2 mg/l (AF 50) |
| PNEC Freshwater sed | 9.06 mg/kg sed dw |
| PNEC Soil | 0.63 mg/kg soil dw |
| PNEC STP | 10 mg/l (AF 100) |
| PNEC Marinewater | 0.2 mg/l (AF 500) |
| 1338-23-4 Reaction mass of butane-2,2-diyl dihydroperoxide and di-sec-butylhexaoxidane | |
| PNEC Marinewater sed | 0.009 mg/kg sed dw |
| PNEC Freshwater | 0.006 mg/l (AF 1.000) |
| PNEC Freshwater sed | 0.088 mg/kg sed dw |
| PNEC Soil | 0.014 mg/kg soil dw |
| PNEC STP | 1.2 mg/l (AF 10) |
| PNEC Marinewater | 0.001 mg/l (AF 10.000) |
| 7722-84-1 hydrogen peroxide solution | |
| PNEC Marinewater sed | 0.047 mg/kg sed dw |
| PNEC Freshwater | 0.013 mg/l (AF 50) |
| PNEC Freshwater sed | 0.047 mg/kg sed dw |
| PNEC Soil | 0.002 mg/kg soil dw |
| PNEC STP | mg/l (AF 100) |
| PNEC Marinewater | 0.013 mg/l (AF 50) |
| 78-93-3 butanone | |
| PNEC Marinewater sed | 284.7 mg/kg sed dw |
| PNEC Freshwater | 55.8 mg/l |
| PNEC Freshwater sed | 284.74 mg/kg sed dw |
| PNEC Soil | 22.5 mg/kg soil dw |
| PNEC STP | 709 mg/l |
| PNEC Marinewater | 55.8 mg/l |
| 123-54-6 pentane-2,4-dione | |
| PNEC Marinewater sed | 0.191 mg/kg sed dw |
| PNEC Freshwater | 0.2 mg/l (AF 50) |
| PNEC Freshwater sed | 1.909 mg/kg sed dw |
| PNEC STP | 1.32 mg/l (AF 10) |
| PNEC Marinewater | 0.02 mg/l (AF 500) |

Ingredients with biological limit values:

78-93-3 butanone

| | |
|----------------------|---|
| BMGV (Great Britain) | 70 µmol/L Medium: urine Sampling time: post shift Parameter: butan-2-one |
|----------------------|---|

· **Additional information:** The lists valid during the making were used as basis.

8.2 Exposure controls

· **Personal protective equipment:**

· **General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Store protective clothing separately.
Avoid close or long term contact with the skin.
Avoid contact with the eyes and skin.
Do not eat, drink, smoke or sniff while working.
Use skin protection cream for skin protection.
Be sure to clean skin thoroughly after work and before breaks.

· **Respiratory protection:**

Not necessary if room is well-ventilated.
Use suitable respiratory device when it exceed exposure limit and when insufficiently ventilated.






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| | |
|---|--|
| · Protection of hands: |  Only use chemical-protective gloves with CE-labelling of category III. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation |
| · Material of gloves | <p style="text-align: center;">Protective gloves</p> The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. Butyl rubber, BR Fluorocarbon rubber (Viton) Nitrile rubber, NBR Neoprene |
| · Penetration time of glove material | The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed. |
| · Eye protection: |  Tightly sealed goggles |
| · Body protection: |  Protective work clothing |

SECTION 9: Physical and chemical properties

| | |
|---|---|
| · 9.1 Information on basic physical and chemical properties | |
| · General Information | |
| · Appearance: | |
| · Form: | Fluid |
| · Colour: | Colourless |
| · Odour: | Characteristic |
| · Odour threshold: | Not determined. |
| · pH-value: | Not determined. |
| · Change in condition | |
| · Melting point/freezing point: | Not applicable. |
| · Initial boiling point and boiling range: | Not applicable. |
| · Flash point: | > SADT |
| · Flammability (solid, gas): | Not applicable. |
| · Decomposition temperature: | +50 °C (SADT) |
| · Auto-ignition temperature: | Product is not selfigniting. |
| · Explosive properties: | Product is not explosive. However, formation of explosive air/vapour mixtures are possible. |
| · Explosion limits: | |
| · Lower: | Not determined. |
| · Upper: | Not determined. |
| · Vapour pressure: | Not determined. |
| · Density at 20 °C: | 1.01 g/cm ³ |
| · Relative density | Not determined. |
| · Vapour density | Not determined. |
| · Evaporation rate | Not determined. |
| · Solubility in / Miscibility with | |
| · water: | Undetermined. |
| · Partition coefficient: n-octanol/water: not determined | |
| · Viscosity: | |
| · Dynamic at 20 °C: | 17 mPas |
| · Kinematic: | Not determined. |
| · 9.2 Other information No further relevant information available. | |
| · Active oxygen | 7.3 - 7.7 % |

SECTION 10: Stability and reactivity

| | |
|--|---|
| · 10.1 Reactivity | No further relevant information available. |
| · 10.2 Chemical stability | |
| · Thermal decomposition / conditions to be avoided: | SADT (Self Accelerating Decomposition Temperature) is the lowest temperature at which self accelerating decomposition may occur with substance in the packaging as used in transport. A dangerous self- |

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accelerating decomposition reaction and, under certain circumstances, explosion or fire can be caused by decomposition at and above the temperature. Contact with incompatible substances can cause decomposition at or below the SADT.

No decomposition if used and stored according to specifications.

To avoid thermal decomposition do not overheat.

· **10.3 Possibility of hazardous reactions**

Self-accelerating decomposition at SADT.

· **10.4 Conditions to avoid**

No further relevant information available.

· **10.5 Incompatible materials:**

Rapid decomposition by dirt, rust, chemicals in particular concentrated acids, alkalis and accelerators (e. g. heavy-metal compounds and amines).

· **10.6 Hazardous decomposition products:**

Hydrocarbons, carbon dioxide and -monoxide.

No hazardous decomposition products if used and stored according to specifications.

· **Additional information:**

Emergency procedures will vary depending on conditions. The customer should have an emergency response plan in place.

* **SECTION 11: Toxicological information**

· **11.1 Information on toxicological effects**

· **Acute toxicity** Harmful if swallowed.

· **LD/LC50 values relevant for classification:**

6846-50-0 1-isopropyl-2,2-dimethyltrimethylene diisobutyrate

| | | |
|--------|------|-------------------------|
| Oral | LD50 | 3,200 mg/kg (rattus) |
| Dermal | LD50 | 18,900 mg/kg (caviinae) |

| | | |
|--------|------|-------------------------|
| Dermal | LD50 | 18,900 mg/kg (caviinae) |
|--------|------|-------------------------|

123-42-2 4-hydroxy-4-methylpentan-2-one

| | | |
|--------|------|----------------------------|
| Oral | LD50 | 2,520 mg/kg (rattus) |
| Dermal | LD50 | 13,630 mg/kg (cuniculosus) |

| | | |
|--------|------|----------------------------|
| Dermal | LD50 | 13,630 mg/kg (cuniculosus) |
|--------|------|----------------------------|

37187-22-7 2,4-Pentanedione, peroxide

| | | |
|--------|------|-----------------------|
| Oral | LD50 | >2,000 mg/kg (rattus) |
| Dermal | LD0 | >2,000 mg/kg (rattus) |

| | | |
|--------|-----|-----------------------|
| Dermal | LD0 | >2,000 mg/kg (rattus) |
|--------|-----|-----------------------|

123-54-6 pentane-2,4-dione

| | | |
|------------|-----------|--------------------|
| Oral | LD50 | 575 mg/kg (rattus) |
| Dermal | LD50 | 790 mg/kg (rattus) |
| Inhalative | LC50 / 4h | 5.1 mg/l (rattus) |

| | | |
|--------|------|--------------------|
| Dermal | LD50 | 790 mg/kg (rattus) |
|--------|------|--------------------|

| | | |
|------------|-----------|-------------------|
| Inhalative | LC50 / 4h | 5.1 mg/l (rattus) |
|------------|-----------|-------------------|

· **Primary irritant effect:**

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

· **Serious eye damage/irritation** Causes serious eye damage.

· **Respiratory or skin sensitisation** May cause an allergic skin reaction.

· **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.

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

· **Reproductive toxicity** Suspected of damaging the unborn child.

· **STOT-single exposure** May cause respiratory irritation.

· **STOT-repeated exposure** Based on available data, the classification criteria are not met.

· **Aspiration hazard** Based on available data, the classification criteria are not met.

* **SECTION 12: Ecological information**

· **12.1 Toxicity**

· **Aquatic toxicity:**

1338-23-4 Reaction mass of butane-2,2-diyl dihydroperoxide and di-sec-butylhexaoxidane

| | |
|------------|---------------|
| LC50 / 96h | 44.2 mg/l (-) |
|------------|---------------|

78-93-3 butanone

| | |
|------------|----------------------------------|
| LC50 / 96h | 3,220 mg/l (pimephales promelas) |
| EC50 / 48h | 5,091 mg/l (daphnia magna) |

| | |
|------------|----------------------------|
| EC50 / 48h | 5,091 mg/l (daphnia magna) |
|------------|----------------------------|

123-54-6 pentane-2,4-dione

| | |
|------------|-------------------------------|
| LC50 / 96h | 72 mg/l (oncorhynchus mykiss) |
| EC50 / 48h | 75 mg/l (daphnia magna) |

| | |
|------------|-------------------------|
| EC50 / 48h | 75 mg/l (daphnia magna) |
|------------|-------------------------|

· **12.2 Persistence and degradability**

No further relevant information available.

· **12.3 Bioaccumulative potential**

No further relevant information available.

· **12.4 Mobility in soil**

No further relevant information available.

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· **Additional ecological information:**



- **General notes:** Must not reach sewage water or drainage ditch undiluted or unneutralised.
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**

- **Recommendation**  After diluting with a suitable desensitisation agent to 10 %, the solution must be supplied to a special treatment (e. g. thermal utilization) under observance of all official regulations.
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Waste disposal key:** Please contact your hazardous waste disposers to assign the right EWC-(European waste catalog)-number.
- **Uncleaned packaging:**
- **Recommendation:** This material and its container must be disposed of as hazardous waste.

* SECTION 14: Transport information

| | |
|---|---|
| · 14.1 UN-Number · ADR, IMDG, IATA | UN3105 |
| · 14.2 UN proper shipping name · ADR · IMDG, IATA | UN3105 ORGANIC PEROXIDE TYPE D, LIQUID (METHYL ETHYL KETONE PEROXIDE(S), ACETYL ACETONE PEROXIDE) ORGANIC PEROXIDE TYPE D, LIQUID (METHYL ETHYL KETONE PEROXIDE(S), ACETYL ACETONE PEROXIDE) |
| · 14.3 Transport hazard class(es) · ADR  · Class · Label | 5.2 (P1) Organic peroxides. 5.2 |
| · IMDG, IATA  · Class · Label | 5.2 Organic peroxides. 5.2 |
| · 14.4 Packing group · ADR, IMDG, IATA | Void |
| · 14.5 Environmental hazards: · Marine pollutant: | No |
| · 14.6 Special precautions for user · Danger code (Kemler): · Stowage Category · Stowage Code · Segregation Code | Warning: Organic peroxides. - D SW1 Protected from sources of heat. SG35 Stow "separated from" acids. SG36 Stow "separated from" alkalis. SG72 See 7.2.6.3.2. |
| · 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code | Not applicable. |
| · Transport/Additional information: | |
| · ADR · Limited quantities (LQ) | 125 ml |

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| | |
|----------------------------|--|
| · Excepted quantities (EQ) | Code: E0 Not permitted as Excepted Quantity |
| · Transport category | 2 |
| · Tunnel restriction code | D |
| · RID / GGVSEB: | like ADR |
| · IMDG | |
| · Limited quantities (LQ) | 125 ml |
| · Excepted quantities (EQ) | Code: E0 Not permitted as Excepted Quantity |

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- Directive 2012/18/EU
- Named dangerous substances
 - ANNEX I None of the ingredients is listed.
- Qualifying quantity (tonnes) for the application of lower-tier requirements 50 t
- Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t
- REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3
- National regulations:
- Other regulations, limitations and prohibitive regulations
 - Please note: Take care of the respective local regulations.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**
 - H225 Highly flammable liquid and vapour.
 - H226 Flammable liquid and vapour.
 - H242 Heating may cause a fire.
 - H271 May cause fire or explosion; strong oxidiser.
 - H302 Harmful if swallowed.
 - H311 Toxic in contact with skin.
 - H314 Causes severe skin burns and eye damage.
 - H317 May cause an allergic skin reaction.
 - H318 Causes serious eye damage.
 - H319 Causes serious eye irritation.
 - H331 Toxic if inhaled.
 - H332 Harmful if inhaled.
 - H335 May cause respiratory irritation.
 - H336 May cause drowsiness or dizziness.
 - H361d Suspected of damaging the unborn child.
 - H412 Harmful to aquatic life with long lasting effects.
- **Department issuing SDS:** Environment protection / Security of labour
- **Contact:** Tel: +49 2871 9902-0
E-mail: mail@pergan.com
- **Abbreviations and acronyms:**
 - RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
 - ICAO: International Civil Aviation Organisation
 - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 - IMDG: International Maritime Code for Dangerous Goods
 - IATA: International Air Transport Association
 - GHS: Globally Harmonised System of Classification and Labelling of Chemicals
 - EINECS: European Inventory of Existing Commercial Chemical Substances
 - ELINCS: European List of Notified Chemical Substances
 - CAS: Chemical Abstracts Service (division of the American Chemical Society)
 - DNEL: Derived No-Effect Level (REACH)
 - PNEC: Predicted No-Effect Concentration (REACH)
 - LC50: Lethal concentration, 50 percent
 - LD50: Lethal dose, 50 percent
 - PBT: Persistent, Bioaccumulative and Toxic
 - vPvB: very Persistent and very Bioaccumulative
 - Flam. Liq. 2: Flammable liquids – Category 2
 - Flam. Liq. 3: Flammable liquids – Category 3
 - Ox. Liq. 1: Oxidizing liquids – Category 1

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Org. Perox. D: Organic peroxides – Type C/D
Acute Tox. 4: Acute toxicity – Category 4
Acute Tox. 3: Acute toxicity – Category 3
Skin Corr. 1A: Skin corrosion/irritation – Category 1A
Skin Corr. 1B: Skin corrosion/irritation – Category 1B
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Skin Sens. 1: Skin sensitisation – Category 1
Repr. 2: Reproductive toxicity – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

· * Data compared to the
previous version altered.