





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

- **1.1 Product identifier**
- **Trade name:** PEROXAN BU M2
- **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 Wiltling, e-mail: c.wiltling@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**  

Flam. Liq. 3	H226 Flammable liquid and vapour.
Org. Perox. E	H242 Heating may cause a fire.
Skin Irrit. 2	H315 Causes skin irritation.
Skin Sens. 1	H317 May cause an allergic skin reaction.
Asp. Tox. 1	H304 May be fatal if swallowed and enters airways.
Aquatic Chronic 2	H411 Toxic 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 GB CLP regulation.
- **Hazard pictograms**

GHS02 GHS07 GHS08 GHS09
- **Signal word** Danger
- **Hazard-determining components of labelling:** Hydrocarbons, C4, 1,3-butadiene-free, polymd., triisobutylene fraction, hydrogenated di-tert-butyl 3,3,5-trimethylcyclohexylidene diperoxide  
tert-butyl alpha,alpha-dimethylbenzyl peroxide
- **Hazard statements** H226 Flammable liquid and vapour.  
H242 Heating may cause a fire.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H304 May be fatal if swallowed and enters airways.  
H411 Toxic 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 packaging.
P243	Take action to prevent static discharges.
P264	Wash thoroughly after handling.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P331	Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P405	Store locked up.
P410	Protect from sunlight.
P411+P235	Store at temperatures not exceeding +30°C. Keep cool.

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P420  
P501

Store separately.  
Dispose of contents/container in accordance with local/regional/national/international regulations.

· **2.3 Other hazards**

· **Results of PBT and vPvB assessment**

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

**SECTION 3: Composition/information on ingredients**

· **3.2 Mixtures**

· **Dangerous components:**

CAS: 3457-61-2 EINECS: 222-389-8 Index number: 617-007-00-5 Reg-No.: 01-2119969063-35	tert-butyl alpha,alpha-dimethylbenzyl peroxide Flam. Liq. 3, H226; Org. Perox. E, H242; Aquatic Chronic 2, H411; Skin Irrit. 2, H315	40-50%
CAS: 6731-36-8 EINECS: 229-782-3 Reg-No.: 01-2119735694-30	di-tert-butyl 3,3,5-trimethylcyclohexylidene diperoxide Org. Perox. B, H241	20-25%
CAS: 93685-81-5 EINECS: 297-629-8 Reg-No.: 01-2119490725-29	Hydrocarbons, C4, 1,3-butadiene-free, polymd., triisobutylene fraction, hydrogenated Alternative CAS number: 13475-82-6 Flam. Liq. 3, H226; Asp. Tox. 1, H304; Aquatic Chronic 4, H413	20-25%
CAS: 98-83-9 EINECS: 202-705-0 Index number: 601-027-00-6	2-phenylpropene Flam. Liq. 3, H226; Aquatic Chronic 2, H411; Eye Irrit. 2, H319; STOT SE 3, H335 Specific concentration limit: STOT SE 3; H335: C ≥ 25 %	0.1-2.5%
CAS: 98-86-2 EINECS: 202-708-7 Index number: 606-042-00-1	acetophenone Acute Tox. 4, H302; Eye Irrit. 2, H319	0.1-2.5%
CAS: 75-91-2 EINECS: 200-915-7 Reg-No.: 01-2119446670-40	tert-butyl hydroperoxide Flam. Liq. 3, H226; Org. Perox. F, H242; Acute Tox. 3, H311; Acute Tox. 2, H330; Muta. 2, H341; Carc. 2, H351; Skin Corr. 1C, H314; Eye Dam. 1, H318; Aquatic Chronic 2, H411; Acute Tox. 4, H302; Skin Sens. 1, H317 Specific concentration limits: Eye Dam. 1; H318: C ≥ 1 % Skin Sens. 1; H317: C ≥ 0.1 % STOT SE 3; H335: C ≥ 5 %	0-1%

· **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:**



Take care of personal protection for the first aider.

· **After inhalation:**

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.

· **After swallowing:**

If symptoms persist consult doctor.

· **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.

**SECTION 5: Firefighting measures**

· **5.1 Extinguishing media**

· **Suitable extinguishing agents:** CO<sub>2</sub>, 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, carbondioxide 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.

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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:**

Inform respective authorities in case of seepage into water course or sewage system.



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 section 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).  
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.



Do not smoke.

· **Information about fire - and explosion protection:**

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.

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.

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- **Further information about storage conditions:** Store away from foodstuffs, drinks and feeding stuffs.  
Protect from heat and direct sunlight.  
Protect from contamination.  
Storage in a collecting room is required.
- **Recommended storage temperature (To maintain quality):** +5 .... +30 °C
- **7.3 Specific end use(s)** No further relevant information available.

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

· **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

**98-83-9 2-phenylpropene**

WEL (Great Britain)	Short-term value: 491 mg/m <sup>3</sup> , 100 ppm Long-term value: 246 mg/m <sup>3</sup> , 50 ppm
IOELV (EU)	Short-term value: 492 mg/m <sup>3</sup> , 100 ppm Long-term value: 246 mg/m <sup>3</sup> , 50 ppm

· **DNELs**

**6731-36-8 di-tert-butyl 3,3,5-trimethylcyclohexylidene diperoxide**

Dermal	DNEL Longterm System	2 mg/kg bw/day (Worker)
Inhalative	DNEL Longterm System	1.4 mg/m <sup>3</sup> (Worker)

**98-86-2 acetophenone**

Dermal	DNEL Longterm System	0.35 mg/kg bw/day (Worker)
Inhalative	DNEL Longterm System	1.23 mg/m <sup>3</sup> (Worker)

**75-91-2 tert-butyl hydroperoxide**

Dermal	DNEL Longterm System	0.21 mg/kg bw/day (Worker)
Inhalative	DNEL Acute Systemic	85.2 mg/m <sup>3</sup> (Worker)
	DNEL Acute Local	28.4 mg/m <sup>3</sup> (Worker)
	DNEL Longterm System	2.2 mg/m <sup>3</sup> (Worker)
	DNEL Longterm Local	0.58 mg/m <sup>3</sup> (Worker)

· **PNECs**

**6731-36-8 di-tert-butyl 3,3,5-trimethylcyclohexylidene diperoxide**

PNEC Marinewater sed	0.01 mg/kg sed dw (AF 500)
PNEC Freshwater sed	0.102 mg/kg sed dw (AF 50)
PNEC Soil	5.29 mg/kg soil dw (AF 10)
PNEC STP	100 mg/l (AF 10)

**98-86-2 acetophenone**

PNEC Marinewater sed	0.113 mg/kg sed dw (-)
PNEC Freshwater	0.086 mg/l (AF 1.000)
PNEC Freshwater sed	1.13 mg/kg sed dw (-)
PNEC Soil	0.175 mg/kg soil dw (-)
PNEC STP	34.6 mg/l (AF 10)
PNEC Marinewater	0.009 mg/l (AF 10.000)

**75-91-2 tert-butyl hydroperoxide**

PNEC Marinewater sed	0.001 mg/kg sed dw
PNEC Freshwater	0.002 mg/l (AF 1.000)
PNEC Seawater	0 mg/l (AF 10.000)
PNEC Freshwater sed	0.006 mg/kg sed dw (-)
PNEC Soil	0.166 mg/kg soil dw (AF 1.000)
PNEC STP	0.17 mg/l (AF 100)

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

· **8.2 Exposure controls**

· **Appropriate engineering controls**

No further data; see section 7.

· **Individual protection measures, such as 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.

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<ul style="list-style-type: none"> <li>· <b>Respiratory protection:</b></li> </ul>	<p>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. Not necessary if room is well-ventilated. Use suitable respiratory device when it exceed exposure limit and when insufficiently ventilated.</p>
<ul style="list-style-type: none"> <li>· <b>Hand protection</b></li> </ul>	<p>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</p>
<ul style="list-style-type: none"> <li>· <b>Material of gloves</b></li> </ul>	<p>Protective gloves 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</p>
<ul style="list-style-type: none"> <li>· <b>Penetration time of glove material</b></li> </ul>	<p>The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.</p>
<ul style="list-style-type: none"> <li>· <b>Eye/face protection</b></li> </ul>	<p>Tightly sealed goggles</p>
<ul style="list-style-type: none"> <li>· <b>Body protection:</b></li> </ul>	<p>Protective work clothing</p>

## SECTION 9: Physical and chemical properties

### · 9.1 Information on basic physical and chemical properties

· <b>General Information</b>	
· <b>Colour:</b>	Yellowish
· <b>Odour:</b>	Characteristic
· <b>Odour threshold:</b>	Not determined.
· <b>Melting point/freezing point:</b>	Not applicable.
· <b>Boiling point or initial boiling point and boiling range</b>	Not applicable.
· <b>Flammability</b>	Not applicable.
· <b>Lower and upper explosion limit</b>	
· <b>Lower:</b>	Not determined.
· <b>Upper:</b>	Not determined.
· <b>Flash point:</b>	60 °C
· <b>Decomposition temperature:</b>	≥ 55 (SADT) °C
· <b>pH</b>	Not determined.
· <b>Viscosity:</b>	
· <b>Kinematic viscosity</b>	Not determined.
· <b>Dynamic at 20 °C:</b>	10 mPas
· <b>Solubility</b>	
· <b>water:</b>	Undetermined.
· <b>Partition coefficient n-octanol/water (log value)</b>	not determined
· <b>Vapour pressure:</b>	Not determined.
· <b>Density and/or relative density</b>	
· <b>Density at 20 °C:</b>	0.875 g/cm <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not determined.

### · 9.2 Other information

· <b>Appearance:</b>	
· <b>Form:</b>	Fluid
· <b>Important information on protection of health and environment, and on safety.</b>	
· <b>Ignition temperature:</b>	Product is not selfigniting.

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· <b>Explosive properties:</b>	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· <b>Change in condition</b>	
· <b>Evaporation rate</b>	Not determined.
· <b>Information with regard to physical hazard classes</b>	
· <b>Explosives</b>	Void
· <b>Flammable gases</b>	Void
· <b>Aerosols</b>	Void
· <b>Oxidising gases</b>	Void
· <b>Gases under pressure</b>	Void
· <b>Flammable liquids</b>	Flammable liquid and vapour.
· <b>Flammable solids</b>	Void
· <b>Self-reactive substances and mixtures</b>	Void
· <b>Pyrophoric liquids</b>	Void
· <b>Pyrophoric solids</b>	Void
· <b>Self-heating substances and mixtures</b>	Void
· <b>Substances and mixtures, which emit flammable gases in contact with water</b>	Void
· <b>Oxidising liquids</b>	Void
· <b>Oxidising solids</b>	Void
· <b>Organic peroxides</b>	Heating may cause a fire.
· <b>Corrosive to metals</b>	Void
· <b>Desensitised explosives</b>	Void
· <b>Other safety characteristics</b>	
· <b>Active oxygen</b>	6.2 - 6.4 %

### 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-accelerating decomposition reaction and, under certain circumstances, explosion or fire can be cause 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, carbondioxide and -monoxid.  
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 plane in place.

### SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity** Based on available data, the classification criteria are not met.

· <b>LD/LC50 values relevant for classification:</b>		
<b>3457-61-2 tert-butyl alpha,alpha-dimethylbenzyl peroxide</b>		
Oral	LD50	4,700 mg/kg (rattus)
Dermal	LD50	>2,000 mg/kg (rattus)
Inhalative	LC50	>1.2 mg/l (rattus)
<b>6731-36-8 di-tert-butyl 3,3,5-trimethylcyclohexylidene diperoxide</b>		
Oral	LD50	>2,000 mg/kg (rattus)
Dermal	LD50	>2,000 mg/kg (rattus)
<b>93685-81-5 Hydrocarbons, C4, 1,3-butadiene-free, polymd., triisobutylene fraction, hydrogenated</b>		
Oral	LD50	>5,000 mg/kg (rattus)

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<b>98-83-9 2-phenylpropene</b>		
Oral	LD50	4,900 mg/kg (rattus)
<b>98-86-2 acetophenone</b>		
Oral	LD50	2,081 mg/kg (rattus)
<b>75-91-2 tert-butyl hydroperoxide</b>		
Oral	LD50	805 mg/kg /(70%) (rattus)
Dermal	LD50	633 mg/kg /(70%) (cuniculosus)
Inhalative	LC50 / 4h	1.2 mg/l /(70%) (rattus)
· <b>Skin corrosion/irritation</b>	Causes skin irritation.	
· <b>Serious eye damage/irritation</b>	Based on available data, the classification criteria are not met.	
· <b>Respiratory or skin sensitisation</b>	May cause an allergic skin reaction.	
· <b>Germ cell mutagenicity</b>	Based on available data, the classification criteria are not met.	
· <b>Carcinogenicity</b>	Based on available data, the classification criteria are not met.	
· <b>Reproductive toxicity</b>	Based on available data, the classification criteria are not met.	
· <b>STOT-single exposure</b>	Based on available data, the classification criteria are not met.	
· <b>STOT-repeated exposure</b>	Based on available data, the classification criteria are not met.	
· <b>Aspiration hazard</b>	May be fatal if swallowed and enters airways.	
<b>11.2 Information on other hazards</b>		
· <b>Endocrine disrupting properties</b>	None of the ingredients is listed.	

## SECTION 12: Ecological information

### 12.1 Toxicity

#### · Aquatic toxicity:

#### **93685-81-5 Hydrocarbons, C4, 1,3-butadiene-free, polymd., triisobutylene fraction, hydrogenated**

EC50 / 48h &gt;0.04 mg/l (daphnia)

IC50 / 72h &gt;0.04 mg/l (alga)

#### **75-91-2 tert-butyl hydroperoxide**

EC50 / 72h 2.1 mg/l /(70%) (selenastrum capricornutum)

LC50 / 96h 42.3 mg/l /(70%) (pimephales promelas)

EC50 24.3 mg/l /(70%) (activa sludge)

EC50 / 48h 20 mg/l /(70%) (daphnia magna)

### 12.2 Persistence and degradability

#### · Degree of elimination:

#### · Classification:

#### **3457-61-2 tert-butyl alpha,alpha-dimethylbenzyl peroxide**

Degradation (Not readily biodegradable) (OECD 301 F)

#### **6731-36-8 di-tert-butyl 3,3,5-trimethylcyclohexylidene diperoxide**

Degradation (Evidence for inherent biodegradability.) (OECD 301 D)

#### **93685-81-5 Hydrocarbons, C4, 1,3-butadiene-free, polymd., triisobutylene fraction, hydrogenated**

Degradation (Not readily biodegradable)

#### **98-86-2 acetophenone**

Degradation (Readily biodegradable) (OECD 301 C)

#### **75-91-2 tert-butyl hydroperoxide**

Degradation (Not readily biodegradable) (OECD 301 D)

### 12.3 Bioaccumulative potential

#### · Partition coefficient: nOctanol/water: [Log Kow]

3457-61-2 tert-butyl alpha,alpha-dimethylbenzyl peroxide

4,4 (25°C)

98-86-2 acetophenone

1,65 (20°C)

75-91-2 tert-butyl hydroperoxide

0,85 (30 °C)

### 12.4 Mobility in soil

No further relevant information available.

### 12.5 Results of PBT and vPvB assessment

#### · PBT:

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

#### · vPvB:

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

### 12.6 Endocrine disrupting properties

The product does not contain substances with endocrine disrupting properties.

### 12.7 Other adverse effects

#### · Remark:

Very toxic for fish

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· **Additional ecological information:**

- **General notes:** Also poisonous for fish and plankton in water bodies.  
Very toxic for aquatic organisms  
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water  
Do not allow product to reach ground water, water course or sewage system.  
Danger to drinking water if even small quantities leak into the ground.

### 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

· <b>14.1 UN number or ID number</b> · <b>ADR, IMDG, IATA</b>	UN3107
· <b>14.2 UN proper shipping name</b> · <b>ADR</b>	UN3107 ORGANIC PEROXIDE TYPE E, LIQUID (1,1-DI-(tert-BUTYLPEROXY)-3,3,5-TRIMETHYLCYCLOHEXANE, tert-BUTYL CUMYL PEROXIDE), ENVIRONMENTALLY HAZARDOUS
· <b>IMDG</b>	ORGANIC PEROXIDE TYPE E, LIQUID (1,1-DI-(tert-BUTYLPEROXY)-3,3,5-TRIMETHYLCYCLOHEXANE, tert-BUTYL CUMYL PEROXIDE), MARINE POLLUTANT
· <b>IATA</b>	ORGANIC PEROXIDE TYPE E, LIQUID (1,1-DI-(tert-BUTYLPEROXY)-3,3,5-TRIMETHYLCYCLOHEXANE, tert-BUTYL CUMYL PEROXIDE)
· <b>14.3 Transport hazard class(es)</b> · <b>ADR</b>	
· <b>Class</b> · <b>Label</b>	5.2 (P1) Organic peroxides. 5.2
· <b>IMDG</b>	
· <b>Class</b> · <b>Label</b>	5.2 Organic peroxides. 5.2
· <b>IATA</b>	
· <b>Class</b> · <b>Label</b>	5.2 Organic peroxides. 5.2
· <b>14.4 Packing group</b> · <b>ADR, IMDG, IATA</b>	Void
· <b>14.5 Environmental hazards:</b>	Product contains environmentally hazardous substances: tert-BUTYL CUMYL PEROXIDE
· <b>Marine pollutant:</b>	Symbol (fish and tree)
· <b>Special marking (ADR):</b>	Symbol (fish and tree)
· <b>14.6 Special precautions for user</b> · <b>Hazard identification number (Kemler code):</b>	Warning: Organic peroxides. -

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· EMS Number:	F-J,S-R
· Stowage Category	D
· Stowage Code	SW1 Protected from sources of heat.
· Segregation Code	SG35 Stow "separated from" SGG1-acids SG36 Stow "separated from" SGG18-alkalis. SG72 See 7.2.6.3.2.
· 14.7 Maritime transport in bulk according to IMO instruments Not applicable.	
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	125 ml
· 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

- Qualifying quantity (tonnes) for the application of lower-tier requirements 50 t
- Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t

##### · DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II

None of the ingredients is listed.

##### · Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

None of the ingredients is listed.

##### · Annex II - REPORTABLE EXPLOSIVES PRECURSORS

None of the ingredients is listed.

##### · Regulation (EC) No 273/2004 on drug precursors

None of the ingredients is listed.

##### · Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors

None of the ingredients is listed.

##### · 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
  - H226 Flammable liquid and vapour.
  - H241 Heating may cause a fire or explosion.
  - H242 Heating may cause a fire.
  - H302 Harmful if swallowed.
  - H304 May be fatal if swallowed and enters airways.
  - H311 Toxic in contact with skin.
  - H314 Causes severe skin burns and eye damage.
  - H315 Causes skin irritation.
  - H317 May cause an allergic skin reaction.
  - H318 Causes serious eye damage.

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**Safety data sheet**  
 according to 1907/2006/EC, Article 31

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Trade name: **PEROXAN BU M2**

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H319 Causes serious eye irritation.  
 H330 Fatal if inhaled.  
 H335 May cause respiratory irritation.  
 H341 Suspected of causing genetic defects.  
 H351 Suspected of causing cancer.  
 H411 Toxic to aquatic life with long lasting effects.  
 H413 May cause long lasting harmful effects to aquatic life.

· **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 relatif au transport international 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 (UK REACH)  
 PNEC: Predicted No-Effect Concentration (UK REACH)  
 LC50: Lethal concentration, 50 percent  
 LD50: Lethal dose, 50 percent  
 PBT: Persistent, Bioaccumulative and Toxic  
 vPvB: very Persistent and very Bioaccumulative  
 Flam. Liq. 3: Flammable liquids – Category 3  
 Org. Perox. B: Organic peroxides – Type B  
 Org. Perox. E: Organic peroxides – Type E/F  
 Org. Perox. F: Organic peroxides – Type E/F  
 Acute Tox. 4: Acute toxicity – Category 4  
 Acute Tox. 3: Acute toxicity – Category 3  
 Acute Tox. 2: Acute toxicity – Category 2  
 Skin Corr. 1C: Skin corrosion/irritation – Category 1C  
 Skin Irrit. 2: Skin corrosion/irritation – Category 2  
 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  
 Muta. 2: Germ cell mutagenicity – Category 2  
 Carc. 2: Carcinogenicity – Category 2  
 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3  
 Asp. Tox. 1: Aspiration hazard – Category 1  
 Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2  
 Aquatic Chronic 4: Hazardous to the aquatic environment - long-term aquatic hazard – Category 4

 · \* **Data compared to the  
 previous version altered.**