


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

- **1.1 Product identifier**
- **Trade name:** PEROXAN BP-40 LS
- **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
Qualified person: E-mail: msds@pergan.com
- **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. E H242 Heating may cause a fire.
 - Eye Irrit. 2 H319 Causes serious eye irritation.
 - Skin Sens. 1 H317 May cause an allergic skin reaction.
 - STOT RE 2 H373 May cause damage to the kidneys through prolonged or repeated exposure. Route of exposure: Oral.
 - Aquatic Acute 1 H400 Very toxic to aquatic life.
 - Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
- **Hazard pictograms**



The product is classified and labelled according to the CLP regulation.

GHS02 GHS07 GHS08 GHS09
- **Signal word** Warning
- **Hazard-determining components of labelling:** dibenzoyl peroxide
ethanediol
- **Hazard statements**
 - H242 Heating may cause a fire.
 - H319 Causes serious eye irritation.
 - H317 May cause an allergic skin reaction.
 - H373 May cause damage to the kidneys through prolonged or repeated exposure. Route of exposure: Oral.
 - H410 Very 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.
 - P264 Wash thoroughly after handling.
 - P273 Avoid release to the environment.
 - P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
 - P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 - P410 Protect from sunlight.
 - P411+P235 Store at temperatures not exceeding +25°C. Keep cool.
 - P420 Store separately.
 - P501 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 REACH, annex XIII.
- **vPvB:** The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

Trade name: PEROXAN BP-40 LS

(Contd. of page 1)

Determination of endocrine-disrupting properties

The product does not contain substances with endocrine disrupting properties.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Dangerous components:

CAS: 94-36-0 EINECS: 202-327-6 Index number: 617-008-00-0 Reg-No.: 01-2119511472-50	dibenzoyl peroxide Org. Perox. B, H241; Aquatic Acute 1, H400 (M=10); Aquatic Chronic 1, H410 (M=10); Eye Irrit. 2, H319; Skin Sens. 1, H317	40-50%
CAS: 107-21-1 EINECS: 203-473-3 Index number: 603-027-00-1 Reg-No.: 01-2119456816-28	ethanediol STOT RE 2, H373; Acute Tox. 4, H302	25-30%

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:

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. If symptoms persist, consult a doctor.

After swallowing:

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.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents:

Use fire extinguishing methods suitable to surrounding conditions.

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.
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.
Dilute with plenty of water.



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.

(Contd. on page 3)

MT

Trade name: **PEROXAN BP-40 LS**

(Contd. of page 2)

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.

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.

Storage in a collecting room is required.

Recommended storage temperature (To maintain quality):

+5 +30 °C

Storage class:

5.2

7.3 Specific end use(s)

No further relevant information available.

Trade name: **PEROXAN BP-40 LS**

(Contd. of page 3)

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:

94-36-0 dibenzoyl peroxide

WEL (Great Britain)	Long-term value: 5 mg/m ³
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107-21-1 ethanediol

IOELV (EU)	Short-term value: 104 mg/m ³ , 40 ppm Long-term value: 52 mg/m ³ , 20 ppm Skin
WEL (Great Britain)	Short-term value: 104** mg/m ³ , 40** ppm Long-term value: 10* 52** mg/m ³ , 20** ppm Sk *particulate **vapour

DNELs

94-36-0 dibenzoyl peroxide

Oral	DNEL Longterm System	2 mg/kg bw/day (General population)
Dermal	DNEL Longterm System	13,3 mg/kg bw/day (Worker)
Inhalative	DNEL Longterm System	39 mg/m3 (Worker)

107-21-1 ethanediol

Dermal	DNEL Longterm System	106 mg/kg bw/day (Worker)
Inhalative	DNEL Longterm Local	35 mg/m3 (Worker)

PNECs

94-36-0 dibenzoyl peroxide

PNEC Marinewater sed	0,001 mg/kg sed dw
PNEC Freshwater	0,00002 mg/l (AF 50)
PNEC Freshwater sed	0,013 mg/kg sed dw
PNEC STP	0,35 mg/l
PNEC Marinewater	0,000002 mg/l (AF 500)

107-21-1 ethanediol

PNEC Marinewater sed	3,7 mg/kg sed dw (-)
PNEC Freshwater	10 mg/l (AF 10)
PNEC Freshwater sed	37 mg/kg sed dw (-)
PNEC STP	199,5 mg/l (AF 10)
PNEC Marinewater	1 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.
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.

Respiratory protection:



Use suitable respiratory device when it exceed exposure limit and when insufficiently ventilated.

Filter A2

Hand protection

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

Protective gloves

Material of 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)

(Contd. on page 5)

MT

Trade name: **PEROXAN BP-40 LS**

(Contd. of page 4)

· **Penetration time of glove material**

Nitrile rubber, NBR
Neoprene

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye/face 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

· Colour:	White
· Odour:	Characteristic
· Odour threshold:	Not determined.
· Melting point/freezing point:	Not applicable.
· Boiling point or initial boiling point and boiling range	Not applicable.
· Flammability	Not applicable.
· Lower and upper explosion limit	
· Lower:	Not determined.
· Upper:	Not determined.
· Flash point:	> SADT
· Decomposition temperature:	> +60 °C (SADT)
· pH	Not determined.
· Viscosity:	
· Kinematic viscosity	Not determined.
· Dynamic at 20 °C:	500 - 1500 mPas
· Solubility	
· water:	Undetermined.
· Partition coefficient n-octanol/water (log value)	not determined
· Vapour pressure:	Not determined.
· Density and/or relative density	
· Density:	Not determined.
· Relative density	Not determined.
· Vapour density	Not determined.

· 9.2 Other information

No further relevant information available.

· Appearance:

· Form: Suspension

· Important information on protection of health and environment, and on safety.

· Ignition temperature:	Product is not selfigniting.
· Explosive properties:	Product does not present an explosion hazard.
· Change in condition	
· Evaporation rate	Not determined.

· Information with regard to physical hazard classes

· Explosives	Void
· Flammable gases	Void
· Aerosols	Void
· Oxidising gases	Void
· Gases under pressure	Void
· Flammable liquids	Void
· Flammable solids	Void
· Self-reactive substances and mixtures	Void
· Pyrophoric liquids	Void
· Pyrophoric solids	Void
· Self-heating substances and mixtures	Void
· Substances and mixtures, which emit flammable gases in contact with water	Void
· Oxidising liquids	Void
· Oxidising solids	Void
· Organic peroxides	Heating may cause a fire.
· Corrosive to metals	Void
· Desensitised explosives	Void

(Contd. on page 6)
MT

Trade name: **PEROXAN BP-40 LS**

(Contd. of page 5)

· Other safety characteristics	
· Active oxygen	2,6 - 2,7 %

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-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.
· LD/LC50 values relevant for classification:	
94-36-0 dibenzoyl peroxide	
Oral LD50	>5.000 mg/kg (rattus)
107-21-1 ethanediol	
Oral LD50	4.000 mg/kg (rattus)
Dermal LD50	~10.600 mg/kg (rabbit)
· Skin corrosion/irritation	Based on available data, the classification criteria are not met.
· Serious eye damage/irritation	Causes serious eye irritation.
· Respiratory or skin sensitisation	May cause an allergic skin reaction.
· 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	Based on available data, the classification criteria are not met.
· STOT-single exposure	Based on available data, the classification criteria are not met.
· STOT-repeated exposure	May cause damage to the kidneys through prolonged or repeated exposure. Route of exposure: Oral.
· Aspiration hazard	Based on available data, the classification criteria are not met.
· 11.2 Information on other hazards	
· Endocrine disrupting properties	
None of the ingredients is listed.	

SECTION 12: Ecological information

· 12.1 Toxicity	
· Aquatic toxicity:	
94-36-0 dibenzoyl peroxide	
EC50 / 72h	0,0711 mg/l (pseudokirchneriella subcapitata)
LC50 / 96h	0,0602 mg/l (oncorhynchus mykiss)
EC50 / 48h	110 mg/l (daphnia)
107-21-1 ethanediol	
LC50 / 96h	18.500 mg/l (oncorhynchus mykiss)
EC50 / 48h	>10.000 mg/l (daphnia)

(Contd. on page 7)

MT

Trade name: PEROXAN BP-40 LS

(Contd. of page 6)

EC50 / 96h	6.500-7.500 mg/l (pseudokirchneriella subcapitata)
NOEL / 48h	10 mg/l
12.2 Persistence and degradability Degree of elimination:	
Classification: 94-36-0 dibenzoyl peroxide Degradation (Readily biodegradable) (OECD 301 D) 107-21-1 ethanediol Degradation (Readily biodegradable) (OECD 301 C)	
12.3 Bioaccumulative potential Partition coefficient: nOctanol/water: [Log Kow]	
94-36-0 dibenzoyl peroxide	3,2 (20 °C)
107-21-1 ethanediol	-1,36 (25°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 REACH, annex XIII. vPvB: The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII. 12.6 Endocrine disrupting properties The product does not contain substances with endocrine disrupting properties. 12.7 Other adverse effects No further relevant information available. Remark: Very toxic for fish 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 desentisation 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.

Recommended cleansing agents:

Water, if necessary together with cleansing agents.

SECTION 14: Transport information

14.1 UN number or ID number ADR, IMDG, IATA	UN3107
14.2 UN proper shipping name ADR IMDG IATA	UN3107 ORGANIC PEROXIDE TYPE E, LIQUID (DIBENZOYL PEROXIDE), ENVIRONMENTALLY HAZARDOUS ORGANIC PEROXIDE TYPE E, LIQUID (DIBENZOYL PEROXIDE), MARINE POLLUTANT ORGANIC PEROXIDE TYPE E, LIQUID (DIBENZOYL PEROXIDE)
14.3 Transport hazard class(es) ADR	
Class	5.2 (P1) Organic peroxides.

(Contd. on page 8)

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Trade name: **PEROXAN BP-40 LS**

(Contd. of page 7)

· Label	5.2
· IMDG	
· Class	5.2 Organic peroxides.
· Label	5.2
· IATA	
· Class	5.2 Organic peroxides.
· Label	5.2
· 14.4 Packing group	
· ADR, IMDG, IATA	Void
· 14.5 Environmental hazards:	Product contains environmentally hazardous substances: DIBENZOYL PEROXIDE
· Marine pollutant:	Symbol (fish and tree)
· Special marking (ADR):	Symbol (fish and tree)
· 14.6 Special precautions for user	Warning: Organic peroxides.
· Hazard identification number (Kemler code):	-
· 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
- Named dangerous substances
 - ANNEX I None of the ingredients is listed.
- Seveso category
 - P6b SELF-REACTIVE SUBSTANCES AND MIXTURES and ORGANIC PEROXIDES
 - E1 Hazardous to the Aquatic Environment
- 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

· 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.

(Contd. on page 9)

MT

Trade name: **PEROXAN BP-40 LS**

(Contd. of page 8)

· **REGULATION (EU) 2019/1148**

· **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.

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.

· **Department issuing SDS:** Environment protection / Security of labour

· **Contact:** Tel: +49 2871 9902-0

E-mail: mail@pergan.com

· **Version number of previous version:**

14

· **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 (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
Org. Perox. B: Organic peroxides – Type B
Org. Perox. E: Organic peroxides – Type E/F
Acute Tox. 4: Acute toxicity – Category 4
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Skin Sens. 1: Skin sensitisation – Category 1
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

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

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