Safety data sheet
according to Regulation (EC) No 1907/2006, Article 31

PERGAN
The Peroxide Company

Printing date 02.04.2024 Version: 11 (replaces version 10) Revision: 20.12.2022

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

· **1.1 Product identifier**

· **Trade name:** **PEROXAN BIB-40 PK**

· **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**

Flam. Sol. 1 H228 Flammable solid.
Org. Perox. G
Aquatic Chronic 4 H413 May cause long lasting harmful effects to aquatic life.

· **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

· **Signal word**
Danger

· **Hazard-determining components of labelling:**
[1,3 (or 1,4)-phenylenebis(1-methylethylidene)]bis[tert-butyl] peroxide

· **Hazard statements**
H228 Flammable solid.
H413 May cause long lasting harmful effects to aquatic life.

· **Precautionary statements**
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P240 Ground and bond container and receiving equipment.
P241 Use explosion-proof [electrical/ventilating/lighting] equipment.
P273 Avoid release to the environment.
P280 Wear eye protection / face protection.
P370+P378 In case of fire: Use CO2, powder or water spray to extinguish.
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.

· **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: 25155-25-3 EINECS: 246-678-3 Reg-No.: 01-2119495677-17	[1,3 (or 1,4)-phenylenebis(1-methylethylidene)]bis[tert-butyl] peroxide Org. Perox. D, H242; Aquatic Chronic 4, H413	30-40%

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

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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:** Take affected persons into fresh air and keep quiet.
· **After skin contact:** 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:** 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.
· **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** 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:** Ensure adequate ventilation.
Pick up mechanically, collect in a suitable receptacle and dispose 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** Open and handle receptacle with care.
Prevent formation of dust.
Wear suitable respiratory protective device when decanting larger quantities without extractor facilities.
Before break and at the end of work hands should be thoroughly washed.
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.
Avoid shock and friction.
· **Information about fire - and explosion protection:** Protect from heat.
Prevent impact and friction.
Dust can combine with air to form an explosive mixture.
Substance/product is oxidising when dry.
Avoid open flames, sparks, direct sunlight and other sources of ignition.

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· **7.2 Conditions for safe storage, including any incompatibilities**
· **Storage:** Pay attention to the special requirements of your local autorithies 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:** Store away from foodstuffs, drinks and feeding stuffs.
· **Further information about storage conditions:** Protect from heat and direct sunlight.
Protect from contamination.
· **Recommended storage temperature (To maintain quality):** max.: +30 °C
· **Storage class:** 5.2
· **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:** The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

· **DNELs**		
25155-25-3 [1,3 (or 1,4)-phenylenebis(1-methylethylidene)]bis[tert-butyl] peroxide		
Dermal	DNEL Longterm System	28 mg/kg bw/day (Worker)
Inhalative	DNEL Longterm System	19,7 mg/m3 (Worker)

· **PNECs**	
25155-25-3 [1,3 (or 1,4)-phenylenebis(1-methylethylidene)]bis[tert-butyl] peroxide	
PNEC Marinewater sed	0,892 mg/kg sed dw (AF 1.000)
PNEC Freshwater sed	8,9 mg/kg sed dw (AF 100)
PNEC STP	100 mg/l (AF 10)

· **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.
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.

Filter P2

· **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)
Nitrile rubber, NBR
Neoprene

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· **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/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 - yellowish
· **Odour:**	Characteristic
· **Odour threshold:**	Not determined.
· **Melting point/freezing point:**	Not applicable.
· **Boiling point or initial boiling point and boiling range**	Not applicable.
· **Flammability**	May cause fire.
· **Lower and upper explosion limit**	
· **Lower:**	Not determined.
· **Upper:**	Not determined.
· **Flash point:**	Not applicable.
· **Decomposition temperature:**	+80 °C (SADT)
· **pH**	Not applicable.
· **Viscosity:**	
· **Kinematic viscosity**	Not applicable.
· **Dynamic:**	Not applicable.
· **Solubility**	
· **water:**	Undetermined.
· **Partition coefficient n-octanol/water (log value)**	not determined
· **Vapour pressure:**	Not applicable.
· **Density and/or relative density**	
· **Density at 20 °C:**	1,5 g/cm³
· **Relative density**	Not determined.
· **Bulk density at 20 °C:**	360 kg/m³
· **Vapour density**	Not applicable.
· **Particle characteristics**	
See section 3.	
· **9.2 Other information**	No further relevant information available.
· **Appearance:**	
· **Form:**	Solid Powder
· **Important information on protection of health and environment, and on safety.**	
· **Ignition temperature:**	Product is not selfigniting.
· **Explosive properties:**	Not determined.
· **Change in condition**	
· **Evaporation rate**	Not applicable.
· **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**	Flammable solid.
· **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

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· **Organic peroxides**	Void
· **Corrosive to metals**	Void
· **Desensitised explosives**	Void
· **Other safety characteristics**	
· **Active oxygen**	3,7 - 3,9 %

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.
· **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:**		
25155-25-3 [1,3 (or 1,4)-phenylenebis(1-methylethylidene)]bis[tert-butyl] peroxide		
Oral	LD50	>5.000 mg/kg (rattus)
Dermal	LD50	>2.000 mg/kg (rattus)

· **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
· **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
· **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** Based on available data, the classification criteria are not met.
· **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:**	
25155-25-3 [1,3 (or 1,4)-phenylenebis(1-methylethylidene)]bis[tert-butyl] peroxide	
LC50 / 96h	750 mg/l (fish)

· **12.2 Persistence and degradability**
· **Degree of elimination:**

· **Classification:**	
25155-25-3 [1,3 (or 1,4)-phenylenebis(1-methylethylidene)]bis[tert-butyl] peroxide	
Degradation	(Not readily biodegradable) (OECD 301 D)

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· **12.3 Bioaccumulative potential**

· **Partition coefficient: nOctanol/water: [Log Kow]**		
25155-25-3	[1,3 (or 1,4)-phenylenebis(1-methylethylidene)]bis[tert-butyl] peroxide	7,3 (20°C)

· **Bioconcentration factor (BCF)**	
25155-25-3 [1,3 (or 1,4)-phenylenebis(1-methylethylidene)]bis[tert-butyl] peroxide	
BCF	1.820

· **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.
· **Additional ecological information:**
· **General notes:** 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.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation**

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 or ID number**
· **ADR, IMDG, IATA** UN1325

· **14.2 UN proper shipping name**
· **ADR** UN1325 FLAMMABLE SOLID, ORGANIC, N.O.S. (DI-(tert-BUTYLPEROXYISOPROPYL)-BENZENE(S))
· **IMDG, IATA** FLAMMABLE SOLID, ORGANIC, N.O.S. (DI-(tert-BUTYLPEROXYISOPROPYL)-BENZENE(S))

· **14.3 Transport hazard class(es)**
· **ADR**

· **Class** 4.1 (F1) Flammable solids, self-reactive substances, polymerizing substances and solid desensitized explosives
· **Label** 4.1

· **IMDG, IATA**

· **Class** 4.1 Flammable solids, self-reactive substances, polymerizing substances and solid desensitized explosives
· **Label** 4.1

· **14.4 Packing group**
· **ADR, IMDG, IATA** II

· **14.5 Environmental hazards:** Not applicable.

· **14.6 Special precautions for user** Warning: Flammable solids, self-reactive substances, polymerizing substances and solid desensitized explosives
· **EMS Number:** F-A,S-G
· **Stowage Category** B

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· **14.7 Maritime transport in bulk according to IMO instruments** Not applicable.

· **Transport/Additional information:**

· **ADR**

· **Limited quantities (LQ)**	1 kg
· **Excepted quantities (EQ)**	Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g
· **Transport category**	2
· **Tunnel restriction code**	E

· **IMDG**

· **Limited quantities (LQ)**	1 kg
· **Excepted quantities (EQ)**	Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g

*
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.

· **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.

· **REGULATION (EU) 2019/1148**

· **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.

· **Relevant phrases** H242 Heating may cause a fire.
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

· **Version number of previous version:** 10
· **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)
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
Flam. Sol. 1: Flammable solids – Category 1
Org. Perox. D: Organic peroxides – Type C/D
Org. Perox. G: Organic peroxides – Type G
Aquatic Chronic 4: Hazardous to the aquatic environment - long-term aquatic hazard – Category 4

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