


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

- **1.1 Product identifier**
- **Trade name:** PEROXAN DC-40 P
- **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
 - Skin Irrit. 2 H315 Causes skin irritation.
 - Eye Irrit. 2 H319 Causes serious eye irritation.
 - Skin Sens. 1 H317 May cause an allergic skin reaction.
 - 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 GHS09
- **Signal word** Danger
- **Hazard-determining components of labelling:** bis(a,a-dimethylbenzyl) peroxide
- **Hazard statements**
 - H228 Flammable solid.
 - H315 Causes skin irritation.
 - H319 Causes serious eye irritation.
 - H317 May cause an allergic skin reaction.
 - 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.
 - P240 Ground and bond container and receiving equipment.
 - P241 Use explosion-proof [electrical/ventilating/lighting] equipment.
 - P264 Wash thoroughly after handling.
 - P273 Avoid release to the environment.
 - P280 Wear eye protection / face 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.
 - P370+P378 In case of fire: Use CO2, powder or water spray to extinguish.
 - P391 Collect spillage.
 - P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Additional information:** Restricted to professional users.
- **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.

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* SECTION 3: Composition/information on ingredients

· 3.2 Mixtures

· Dangerous components:

CAS: 80-43-3 EINECS: 201-279-3 Index number: 617-006-00-X Reg-No.: 01-2119541688-27	bis(a,a-dimethylbenzyl) peroxide Org. Perox. F, H242; Aquatic Chronic 2, H411; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1B, H317	40-50%
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· **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. If symptoms persist, consult a doctor.

· 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.

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- 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.
- **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:** 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.
- **Recommended storage temperature (To maintain quality):** max.: +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:**
- The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

· DNELs		
80-43-3 bis(a,a-dimethylbenzyl) peroxide		
Oral	DNEL Longterm System	0.4 mg/kg bw/day (General population)
Dermal	DNEL Longterm System	0.8 mg/kg bw/day (Worker)
		0.4 mg/kg bw/day (General population)
Inhalative	DNEL Longterm System	5.6 mg/m3 (Worker)
		1.4 mg/m3 (General population)
· PNECs		
80-43-3 bis(a,a-dimethylbenzyl) peroxide		
PNEC Freshwater	0.00234 mg/l (AF 50)	
PNEC Freshwater sed	2.24 mg/kg sed dw (-)	
PNEC Soil	0.447 mg/kg soil dw (-)	
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.
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.

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· 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
· 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:	Not determined.
· Relative density	Not determined.
· Bulk density at 20 °C:	410 - 480 kg/m³
· Vapour density	Not applicable.

· 9.2 Other information

· Appearance:	No further relevant information available.
· 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

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· 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
· Organic peroxides	Void
· Corrosive to metals	Void
· Desensitised explosives	Void
· Other safety characteristics	
· Active oxygen	2.3 - 2.4 %

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.
· 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:

80-43-3 bis(a,a-dimethylbenzyl) peroxide

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

· Skin corrosion/irritation	Causes skin irritation.
· 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	Based on available data, the classification criteria are not met.
· Aspiration hazard	Based on available data, the classification criteria are not met.

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· 11.2 Information on other hazards

· Endocrine disrupting properties

None of the ingredients is listed.

SECTION 12: Ecological information

· 12.1 Toxicity

· Aquatic toxicity:

80-43-3 bis(a,a-dimethylbenzyl) peroxide

EC50 / 72h >20 mg/l (algae)

EC50 >1,000 mg/l (activa sludge)

· 12.2 Persistence and degradability

· Degree of elimination:

· Classification:

80-43-3 bis(a,a-dimethylbenzyl) peroxide

Degradation (Not readily biodegradable) (OECD 301 F)

· 12.3 Bioaccumulative potential

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

80-43-3 bis(a,a-dimethylbenzyl) peroxide

5,6 (25°C)

· Bioconcentration factor (BCF)

80-43-3 bis(a,a-dimethylbenzyl) peroxide

BCF 747

· 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

No further relevant information available.

· Remark:

Toxic for fish

· Additional ecological information:

· General notes:

Also poisonous for fish and plankton in water bodies.

Toxic for aquatic organisms

Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

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. (DICUMYL PEROXIDE), ENVIRONMENTALLY HAZARDOUS

· IMDG

FLAMMABLE SOLID, ORGANIC, N.O.S. (DICUMYL PEROXIDE), MARINE POLLUTANT

· IATA




FLAMMABLE SOLID, ORGANIC, N.O.S. (DICUMYL PEROXIDE)

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· 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	
	
· Class	4.1 Flammable solids, self-reactive substances, polymerizing substances and solid desensitized explosives
· Label	4.1
· 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:	Product contains environmentally hazardous substances: DICUMYL PEROXIDE
· Marine pollutant:	Yes
· Special marking (ADR):	Symbol (fish and tree)
· 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
· 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
· RID / GGVSEB:	like ADR
· 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

· Poisons Act

· Regulated explosives precursors

None of the ingredients is listed.

· Regulated poisons

None of the ingredients is listed.

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· Reportable explosives precursors	
None of the ingredients is listed.	
· Reportable poisons	
None of the ingredients is listed.	
· Directive 2012/18/EU	
· Qualifying quantity (tonnes) for the application of lower-tier requirements	200 t
· Qualifying quantity (tonnes) for the application of upper-tier requirements	500 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	H242 Heating may cause a fire. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H411 Toxic 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 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. Sol. 1: Flammable solids – Category 1 Org. Perox. F: Organic peroxides – Type E/F Org. Perox. G: Organic peroxides – Type G Skin Irrit. 2: Skin corrosion/irritation – Category 2 Eye Irrit. 2: Serious eye damage/eye irritation – Category 2 Skin Sens. 1: Skin sensitisation – Category 1 Skin Sens. 1B: Skin sensitisation – Category 1B Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

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