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

PERGAN
The Peroxide Company

Printing date 15.03.2017 Version: 4 Revision: 14.03.2017

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

· **1.1 Product identifier**

· **Trade name:** **PEROXAN DC-P**
· **CAS Number:** 80-43-3
· **EC number:** 201-279-3
· **Index number:** 617-006-00-X
· **Registration number:** 01-2119541688-27

· **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 / Security of labour : Mr. Christoph Wilting, e-mail: c.wilting@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. F	H242	Heating may cause a fire.
Skin Irrit. 2	H315	Causes skin irritation.
Eye Irrit. 2	H319	Causes serious eye irritation.
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 substance is classified and labelled according to the CLP regulation.
· **Hazard pictograms**

GHS02 GHS07 GHS09

· **Signal word** Warning

· **Hazard-determining components of labelling:** bis(a,a-dimethylbenzyl) peroxide
· **Hazard statements**
H242 Heating may cause a fire.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
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 container.
P264	Wash thoroughly after handling.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/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.
P410	Protect from sunlight.
P411+P235	Store at temperatures not exceeding +30°C. Keep cool.
P420	Do not mix with peroxide-accelerators or reducing agents.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

· **2.3 Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.

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· **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· **3.1 Chemical characterisation: Substances**
· **CAS No. Description** 80-43-3 bis (alpha,alpha-dimethylbenzyl) peroxide
· **Identification number(s)**
· **EC number:** 201-279-3
· **Index number:** 617-006-00-X

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.
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.

Do not allow to enter sewers/ surface or ground water.
· **6.3 Methods and material for containment and cleaning up:** Ensure adequate ventilation.
Large quantities should be diluted with suitable desensitation agent to a concentration below 10 % before disposal.
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.

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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 dust.
Wear suitable respiratory protective device when decanting larger quantities without extractor facilities.
Do not refill residue into storage receptacles.
Restrict the quantity stored at the work place.
Before break and at the end of work hands should be thoroughly washed.
Only use tools made of suitable materials (e. g. polyethylene or stainless steel).
Keep away from dirt, rust, chemicals in particular concentrated acids, alkalis and accelerators (e. g. heavy-metal compounds and amines).
Oxidizing because of releasing oxygene.
While using do not eat, drink or smoke.
Do not generate flames or sparks.
Keep product and emptied container away from heat and sources of ignition.
Avoid shock and friction.
Take precautionary measures against static discharges.


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.
Dust can combine with air to form an explosive mixture.
Substance/product is oxidising when dry.
Product is not explosive. However, formation of explosive air/dust mixtures are 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 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:**

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.

· **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

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

· **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:** Not required.

· **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)

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

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


Filter P2

· **Protection of hands:** Only use chemical-protective gloves with CE-labelling of category III.


Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

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 protection:**


Tightly sealed goggles

· **Body protection:**


Protective work clothing

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**
· **General Information**
· **Appearance:**
· **Form:** Solid
Powder
· **Colour:** Not determined.
· **Odour:** Characteristic
· **Odour threshold:** Not determined.

· **pH-value:** Not applicable.

· **Change in condition**
· **Melting point/freezing point:** Not applicable.
· **Initial boiling point and boiling range:** Not applicable.

· **Flash point:** Not applicable.

· **Flammability (solid, gas):** May cause fire.

· **Decomposition temperature:** +80 °C (SADT)

· **Auto-ignition temperature:** Not determined.

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· **Explosive properties:**	Product is not explosive. However, formation of explosive air/dust mixtures are possible.
· **Explosion limits:**	
· **Lower:**	Not determined.
· **Upper:**	Not determined.
· **Vapour pressure:**	Not applicable.
· **Density:**	Not determined.
· **Bulk density at 20 °C:**	400 - 510 kg/m³
· **Relative density**	Not determined.
· **Vapour density**	Not applicable.
· **Evaporation rate**	Not applicable.
· **Solubility in / Miscibility with**	
· **water:**	Undetermined.
· **Partition coefficient: n-octanol/water:**	not determined
· **Viscosity:**	
· **Dynamic:**	Not applicable.
· **Kinematic:**	Not applicable.
· **9.2 Other information**	No further relevant information available.
· **Active oxygen**	> 5.8 %

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.

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SECTION 11: Toxicological information

· **11.1 Information on toxicological effects**
· **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	> 2000 mg/kg (rattus)
Dermal	LD50	>2000 mg/kg (rattus)

· **Primary irritant effect:**
· **Skin corrosion/irritation** Causes skin irritation.
· **Serious eye damage/irritation** Causes serious eye irritation.
· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
· **Carcinogenicity** Based on available data, the classification criteria are not met.
· **Reproductive toxicity** 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.

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

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SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:**	
80-43-3 bis(a,a-dimethylbenzyl) peroxide	
EC50 / 72h	>20 mg/l (alga)
EC50	> 1000 mg/l (activa sludge)

· **12.2 Persistence and degradability** No further relevant information available.
· **12.3 Bioaccumulative potential** No further relevant information available.
· **12.4 Mobility in soil** No further relevant information available.
· **Ecotoxical effects:**
· **Remark:** Toxic for fish
· **Additional ecological information:**
· **General notes:** Water hazard class 2 (German Regulation) (Assessment by list): 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.
Also poisonous for fish and plankton in water bodies.
Toxic for aquatic organisms
· **12.5 Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

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

After diluting with a suitable inert solid material to 10 %, the product must be supplied to a special treatment (e. g. thermal utilization) under observance of all official regulations.

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **Waste disposal key:** Please contact your hazardous waste disposers to assign the right EWC-(European waste catalog)-number.

· **Uncleaned packaging:**
· **Recommendation:** This material and its container must be disposed of as hazardous waste.

SECTION 14: Transport information

· **14.1 UN-Number**
· **ADR, IMDG, IATA** UN3110

· **14.2 UN proper shipping name**
· **ADR** 3110 ORGANIC PEROXIDE TYPE F, SOLID (DICUMYL PEROXIDE), ENVIRONMENTALLY HAZARDOUS
· **IMDG** ORGANIC PEROXIDE TYPE F, SOLID (DICUMYL PEROXIDE), MARINE POLLUTANT
· **IATA** ORGANIC PEROXIDE TYPE F, SOLID (DICUMYL PEROXIDE)

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

· **Class** 5.2 (P1) Organic peroxides.
· **Label** 5.2

· **IMDG**

· **Class** 5.2 Organic peroxides.

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· **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: DICUMYL PEROXIDE
· **Marine pollutant:**	Yes
	Symbol (fish and tree)
· **Special marking (ADR):**	Symbol (fish and tree)
· **14.6 Special precautions for user**	Warning: Organic peroxides.
· **Danger code (Kemler):**	539
· **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**	Not applicable.
· **Transport/Additional information:**	
· **ADR**	
· **Limited quantities (LQ)**	500 g
· **Transport category**	2
· **Tunnel restriction code**	D
· **RID / GGVSEB:**	like ADR

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

· **National regulations:**

· **Other regulations, limitations and prohibitive regulations**
· **Please note:** Take care of the respective local regulations.
· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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

· **Abbreviations and acronyms:**
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
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. F: Organic peroxides – Type E/F
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

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Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

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