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# Safety Data Sheet

acc. to OSHA HCS

Printing date 04/27/2016

Reviewed on 04/27/2016

## 1: Identification

- **1.1 Product identifier**
- **Trade name: SILIKAL Powder Hardener 50%**
- **Application of the substance / the preparation: Catalyst**
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Silikal America  
609-B Fertilla Street  
Carrolton, GA 30117  
Tel.: 770.830.1404  
Fax.: 777.830.9213  
info@silikalamerica.com
- **Information department: Silikal America**
- **1.4 Emergency telephone number: INFOTRAC 1-800-535-5053**

## 2: Hazard(s) identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**  
Org. Perox. CD H242 Heating may cause a fire.  
Eye Irrit. 2A H319 Causes serious eye irritation.  
Skin Sens. 1 H317 May cause an allergic skin reaction.  
Repr. 2 H361 Suspected of damaging fertility or the unborn child.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**  
The product is classified and labeled according to the CLP regulation.
- **Hazard pictograms**



GHS02 GHS07 GHS08

- **Signal word** Danger
- **Hazard-determining components of labeling:**  
dicyclohexyl phthalate  
dibenzoyl peroxide
- **Hazard statements**  
H242 Heating may cause a fire.  
H319 Causes serious eye irritation.  
H317 May cause an allergic skin reaction.  
H361 Suspected of damaging fertility or the unborn child.
- **Precautionary statements**  
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
P261 Avoid breathing dust/fume/gas/mist/vapors/spray  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P280 Wear protective gloves / 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.  
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

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- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



Health = 1  
Fire = 3  
Reactivity = 0

The substance possesses oxidizing properties.

- **HMS-ratings (scale 0 - 4)**



Health = \*1  
Fire = 3  
Reactivity = 0

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

## 3: Composition/information on ingredients

- **3.2 Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

94-36-0	dibenzoyl peroxide	25-50%
	Org. Perox. B, H241;  Eye Irrit. 2A, H319; Skin Sens. 1, H317	
84-61-7	dicyclohexyl phthalate	25-50%
	Repr. 2, H361;  Skin Sens. 1, H317	

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

## 4: First-aid measures

- **4.1 Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** Supply fresh air and to be sure call for a doctor.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**  
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Drink copious amounts of water and provide fresh air. Immediately call a 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.

## 5: Fire-fighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**  
Foam  
Sand  
CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **5.2 Special hazards arising from the substance or mixture**  
In case of fire, the following can be released:

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Hydrocarbons

Carbon monoxide and carbon dioxide

- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.
- **Additional information** Cool endangered receptacles with water spray.

### 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Ensure adequate ventilation  
Wear protective clothing.  
Keep away from ignition sources  
Use respiratory protective device against the effects of fumes/dust/aerosol.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Pick up mechanically.  
Dispose contaminated material as waste according to item 13.  
Do not flush with water or aqueous cleansing agents
- **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.

### 7: Handling and storage

- **7.1 Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of dust.
- **Information about protection against explosions and fires:**  
Keep ignition sources away - Do not smoke.  
Use explosion-proof apparatus / fittings and spark-proof tools.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**  
Store only in the original receptacle.  
Store in cool, dry conditions in well sealed receptacles.  
Do not allow to enter sewers/ surface or ground water.
- **Information about storage in one common storage facility:**  
Do not store together with reducing agents, heavy-metal compounds, acids and alkalis.
- **Further information about storage conditions:**  
Store receptacle in a well ventilated area.  
Protect from heat and direct sunlight.
- **Maximum storage temperature:** 25 °C
- **7.3 Specific end use(s)** No further relevant information available.

### 8: Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **8.1 Control parameters**

- **Components with limit values that require monitoring at the workplace:**

#### 94-36-0 dibenzoyl peroxide

PEL	Long-term value: 5 mg/m <sup>3</sup>
REL	Long-term value: 5 mg/m <sup>3</sup>
TLV	Long-term value: 5 mg/m <sup>3</sup>

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- **Additional information:** The lists that were valid during the creation were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing.  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes and skin.
- **Breathing equipment:** Suitable respiratory protective device recommended.
- **Recommended filter device for short term use:** Filter P2
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation (EN 374)

- **Material of gloves**  
Nitrile rubber, NBR  
Butyl rubber, BR
- **Penetration time of glove material**  
The exact break through 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

## 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### General Information

#### Appearance:

Form:	Powder
Color:	White
Odor:	Weak, characteristic
Odor threshold:	Not determined.

pH-value: Not applicable.

#### Change in condition

Boiling point/Boiling range: 400 °C (752 °F)

Flash point: 180 °C (356 °F)

Flammability (solid, gaseous): May cause fire.

#### Ignition temperature:

Decomposition temperature: 60 °C

Auto igniting: Product is not selfigniting.

Danger of explosion: Product does not present an explosion hazard.

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· <b>Explosion limits:</b>	
<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.
· <b>Vapor pressure at 20 °C (68 °F):</b>	1 hPa (1 mm Hg)
· <b>Density at 20 °C (68 °F):</b>	1.24 g/cm <sup>3</sup> (10.348 lbs/gal)
· <b>Bulk density:</b>	0.56 g/cm <sup>3</sup> (4.673 lbs/gal)
· <b>Relative density</b>	Not determined.
· <b>Vapor density</b>	Not applicable.
· <b>Evaporation rate</b>	Not applicable.
· <b>Solubility in / Miscibility with Water:</b>	Insoluble.
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
<b>Dynamic:</b>	Not applicable.
<b>Kinematic:</b>	Not applicable.
· <b>Solvent content:</b>	
<b>Organic solvents:</b>	0.0 %
<b>Solids content:</b>	100.0 %
· <b>9.2 Other information</b>	No further relevant information available.

### 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
To avoid thermal decomposition do not overheat.  
Keep away from heat and direct sunlight.  
No decomposition if used and stored according to specifications.
- **Decomposition will begin at:** 60 °C
- **10.3 Possibility of hazardous reactions**  
Visible decomposition with spontaneous ignition on heating.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:**  
Do not store together with reducing agents, heavy-metal compounds, acids and alkalis.  
Reacts with alkali, amines and strong acids.
- **10.6 Hazardous decomposition products:**  
Hydrocarbons  
Carbon monoxide and carbon dioxide
- **Additional information:** Do not allow to enter sewers/ surface or ground water.

### 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:** Based on available data, the classification criteria are not met.
- **LD/LC50 values that are relevant for classification:**

#### 94-36-0 dibenzoyl peroxide

Oral	LD50	>5000 mg/kg (rat)
Inhalative	LC50 (4h)	>24.3 mg/l (rat)

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**84-61-7 dicyclohexyl phthalate**

Oral	LD50	30000 mg/kg (rat)
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- **Primary irritant effect:**
- **on the skin:** Based on available data, the classification criteria are not met.
- **on the eye:**  
Causes serious eye irritation.
- **Sensitization:**  
May cause an allergic skin reaction.
- **Additional toxicological information:**
- **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

94-36-0	dibenzoyl peroxide	3
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· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

**12: Ecological information**· **12.1 Toxicity**· **Aquatic toxicity:****94-36-0 dibenzoyl peroxide**

LC50 (96h)	2 mg/l (fish)
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- **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.
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (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.  
The material is harmful to the environment.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

**13: Disposal considerations**· **13.1 Waste treatment methods**· **Recommendation:**

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

Must be specially treated adhering to official regulations.

· **Uncleaned packagings:**· **Recommendation:**

Packaging can be reused or recycled after cleaning.

Packagings that cannot be cleansed are to be disposed of in the same manner as the product.

Disposal must be made according to official regulations.

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## 14: Transport information

<ul style="list-style-type: none"> <li>· 14.1 UN-Number</li> <li>· DOT, ADR, IMDG, IATA</li> </ul>	UN3106
<ul style="list-style-type: none"> <li>· 14.2 UN proper shipping name</li> <li>· DOT, IATA</li> <li>· ADR</li> <li>· IMDG</li> </ul>	Organic peroxide type D, solid (dibenzoyl peroxide) 3106 Organic peroxide type D, solid (dibenzoyl peroxide), ENVIRONMENTALLY HAZARDOUS ORGANIC PEROXIDE TYPE D, SOLID (dibenzoyl peroxide), MARINE POLLUTANT
<ul style="list-style-type: none"> <li>· 14.3 Transport hazard class(es)</li> <li>· DOT</li> <li>· Class</li> </ul>	5.2 Organic peroxides
<ul style="list-style-type: none"> <li>· ADR, IMDG</li> </ul> <div style="display: flex; justify-content: space-around; align-items: center; margin: 5px 0;">   </div> <ul style="list-style-type: none"> <li>· Class</li> <li>· Label</li> </ul>	5.2 Organic peroxides 5.2
<ul style="list-style-type: none"> <li>· IATA</li> </ul> <div style="display: flex; justify-content: center; align-items: center; margin: 5px 0;">  </div> <ul style="list-style-type: none"> <li>· Class</li> <li>· Label</li> </ul>	5.2 Organic peroxides 5.2
<ul style="list-style-type: none"> <li>· 14.4 Packing group</li> <li>· DOT, ADR, IMDG, IATA</li> </ul>	Void
<ul style="list-style-type: none"> <li>· 14.5 Environmental hazards:</li> <li>· Marine pollutant:</li> <li>· Special marking (ADR):</li> </ul>	Yes Symbol (fish and tree) Symbol (fish and tree)
<ul style="list-style-type: none"> <li>· 14.6 Special precautions for user</li> <li>· Danger code (Kemler):</li> <li>· EMS Number:</li> <li>· Stowage Category</li> <li>· Stowage Code</li> <li>· Segregation Code</li> </ul>	Warning: Organic peroxides - F-J,S-R D SW1 Protected from sources of heat. SG35 Stow "separated from" acids. SG36 Stow "separated from" alkalis.
<ul style="list-style-type: none"> <li>· 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</li> </ul>	Not applicable.
<ul style="list-style-type: none"> <li>· Transport/Additional information:</li> </ul>	
<ul style="list-style-type: none"> <li>· ADR</li> <li>· Excepted quantities (EQ)</li> </ul>	Code: E0 Not permitted as Excepted Quantity
<ul style="list-style-type: none"> <li>· IMDG</li> <li>· Limited quantities (LQ)</li> </ul>	500 g

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<ul style="list-style-type: none"> <li>· <b>Excepted quantities (EQ)</b></li> </ul>	Code: E0 Not permitted as Excepted Quantity
<ul style="list-style-type: none"> <li>· <b>UN "Model Regulation":</b></li> </ul>	UN 3106 ORGANIC PEROXIDE TYPE D, SOLID (DIBENZOYL PEROXIDE), 5.2, ENVIRONMENTALLY HAZARDOUS

## 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

- **Sara**

- **Section 355 (extremely hazardous substances):**

None of the ingredient is listed.

- **Section 313 (Specific toxic chemical listings):**

94-36-0 | dibenzoyl peroxide

- **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

- **Proposition 65**

- **Chemicals known to cause cancer:**

None of the ingredients is listed.

- **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

- **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

- **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

- **Carcinogeny categories**

- **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

- **TLV (Threshold Limit Value established by ACGIH)**

94-36-0 | dibenzoyl peroxide

A4

- **MAK (German Maximum Workplace Concentration)**

None of the ingredients is listed.

- **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

- **AGW (German Workplace Threshold Value)**

None of the ingredients is listed.

- **National regulations:**

- **Technical instructions (air):**

Class	Share in %
II	25-50

- **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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**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:** Silikal America
- **Date of preparation / last revision** 04/27/2016 / 2
- **Abbreviations and acronyms:**
  - Org. Perox. B: Organic Peroxides, Type B
  - Org. Perox. CD: Organic Peroxides, Types C, D
  - Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A
  - Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
  - Repr. 2: Reproductive toxicity, Hazard Category 2
- \* **Data compared to the previous version altered.**

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