

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

- **1.1 Product identifier**
- **Trade name: Cactus PMMA Catalyst**

- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
Unsuitable for home DIY applications.
- **Application of the substance / the preparation: Catalyst**


- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Cactus Industrial Ltd
Unit 11, Block 6 Trading Estate, Third Road, Blantyre Industrial Estate, Blantyre
United Kingdom, G72 0UP
Tel: +44(0) 1698 591 635
e-mail: info@cactusindustrial.com

- **1.4 Emergency telephone number:**
Emergency CONTACT (24-Hour-Number): +44(0) 1698 591 635

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**

Org. Perox. D	H242	Heating may cause a fire.
Eye Irrit. 2	H319	Causes serious eye irritation.
Skin Sens. 1	H317	May cause an allergic skin reaction.
Repr. 1B	H360D	May damage the unborn child.
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**
The product is classified and labelled according to the GB CLP regulation.
- **Hazard pictograms**

GHS02 GHS07 GHS08 GHS09

- **Signal word** Danger
- **Hazard-determining components of labelling:**
dicyclohexyl phthalate
dibenzoyl peroxide
- **Hazard statements**
H242 Heating may cause a fire.
H319 Causes serious eye irritation.

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- H317 May cause an allergic skin reaction.
- H360D May damage the unborn child.
- 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.
- P234 Keep only in original packaging.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P308+P313 IF exposed or concerned: Get medical advice/attention.
- P370+P378 In case of fire: Use CO₂, powder or water spray to extinguish.
- P403 Store in a well-ventilated place.
- 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:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**

· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 84-61-7 EINECS: 201-545-9 Reg.nr.: 01-2119978223-34-XXXX	dicyclohexyl phthalate ⚠ Repr. 1B, H360D; ⚠ Skin Sens. 1, H317; Aquatic Chronic 3, H412	25-50%
CAS: 94-36-0 EINECS: 202-327-6 Reg.nr.: 01-2119511472-50-XXXX	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	25-50%

· **SVHC**

84-61-7 | dicyclohexyl phthalate

· **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:** 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.

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- **After swallowing:** Drink plenty of water and provide fresh air. 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:**
Foam
Sand
CO₂, 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:
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.

SECTION 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.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of dust.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.

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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.

SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

84-61-7 dicyclohexyl phthalate

WEL Long-term value: 5 mg/m³

94-36-0 dibenzoyl peroxide

WEL Long-term value: 5 mg/m³

· **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**

· **Appropriate engineering controls** No further data; see item 7.

· **Individual protection measures, such as 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.

· **Respiratory protection:** Suitable respiratory protective device recommended.

· **Recommended filter device for short term use:** Filter P2

· **Hand protection**



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

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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/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**

· Physical state	Solid
· Colour:	White
· Odour:	Weak, characteristic
· Odour threshold:	Not determined.
· Boiling point or initial boiling point and boiling range	400 °C
· Flammability	May cause fire.
· Lower and upper explosion limit	
· Lower:	Not determined.
· Upper:	Not determined.
· Flash point:	180 °C
· Decomposition temperature:	60 °C
· pH	Not applicable.
· Viscosity:	
· Kinematic viscosity	Not applicable.
· Dynamic:	Not applicable.
· Solubility	
· water:	Insoluble.
· Partition coefficient n-octanol/water (log value)	Not determined.
· Vapour pressure at 20 °C:	1 hPa
· Density and/or relative density	
· Density at 20 °C:	1.24 g/cm ³
· Relative density	Not determined.
· Bulk density:	0.64 g/cm ³
· Vapour density	Not applicable.

· **9.2 Other information**

· Appearance:	
· Form:	Powder

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- **Important information on protection of health and environment, and on safety.**
- **Auto-ignition temperature:** Product is not selfigniting.
- **Explosive properties:** Product does not present an explosion hazard.
- **Solvent content:**
- **Organic solvents:** 0.0 %
- **Solids content:** 100.0 %
- **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** 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

SECTION 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 starts 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.

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- **10.6 Hazardous decomposition products:**
Hydrocarbons
Carbon monoxide and carbon dioxide
- **Additional information:** Do not allow to enter sewers/ surface or ground water.

SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity**

- **LD/LC50 values relevant for classification:**

84-61-7 dicyclohexyl phthalate

Oral	LD50	30,000 mg/kg (rat)
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94-36-0 dibenzoyl peroxide

Oral	LD50	>5,000 mg/kg (rat)
Inhalative	LC50 (4h)	>24.3 mg/l (rat)

- **Serious eye damage/irritation** Causes serious eye irritation.
- **Respiratory or skin sensitisation** May cause an allergic skin reaction.
- **Reproductive toxicity** May damage the unborn child.
- **11.2 Information on other hazards**

- **Endocrine disrupting properties**

84-61-7	dicyclohexyl phthalate	List I, II
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SECTION 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.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Endocrine disrupting properties**
For information on endocrine disrupting properties see section 11.
- **12.7 Other adverse effects**

- **Remark:** Very toxic for fish

- **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.

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Also poisonous for fish and plankton in water bodies.
 The material is harmful to the environment.
 Very toxic for aquatic organisms

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.

Must be specially treated adhering to official regulations.

· **Uncleaned packaging:**

· **Recommendation:**

Packaging may be reused or recycled after cleaning.

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

Disposal must be made according to official regulations.

SECTION 14: Transport information

· **14.1 UN number or ID number**

· **ADR, IMDG, IATA**

UN3106

· **14.2 UN proper shipping name**

· **ADR**

3106 ORGANIC PEROXIDE TYPE D, SOLID,
ENVIRONMENTALLY HAZARDOUS

· **IMDG**

ORGANIC PEROXIDE TYPE D, SOLID, MARINE
POLLUTANT

· **IATA**

ORGANIC PEROXIDE TYPE D, SOLID

· **14.3 Transport hazard class(es)**

· **ADR, IMDG**



· **Class**

5.2 Organic peroxides.

· **Label**

5.2

· **IATA**



· **Class**

5.2 Organic peroxides.

· **Label**

5.2

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· 14.4 Packing group · ADR, IMDG, IATA	Void
· 14.5 Environmental hazards: · Marine pollutant:	Yes Symbol (fish and tree)
· Special marking (ADR):	Symbol (fish and tree)
· 14.6 Special precautions for user · Hazard identification number (Kemler code): - · EMS Number: · Stowage Category · Stowage Code · Segregation Code	Warning: Organic peroxides. - F-J,S-R D SW1 Protected from sources of heat. SG35 Stow "separated from" SGG1-acids SG36 Stow "separated from" SGG18-alkalis.
· 14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
· Transport/Additional information:	
· ADR · Limited quantities (LQ) · Excepted quantities (EQ)	500 g Code: E0 Not permitted as Excepted Quantity
· Transport category · Tunnel restriction code	2 D
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	500 g Code: E0 Not permitted as Excepted Quantity
· UN "Model Regulation":	UN 3106 ORGANIC PEROXIDE TYPE D, SOLID, 5.2, ENVIRONMENTALLY HAZARDOUS

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

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- **National regulations:**
- **Technical instructions (air):**

Class	Share in %
II	25-50

- **Substances of very high concern (SVHC) according to UK REACH**

84-61-7	dicyclohexyl phthalate
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- **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.

- **Relevant phrases**

H241 Heating may cause a fire or explosion.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H360D May damage the unborn child.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.

- **Department issuing SDS:** Environmental Protection Department

- **Abbreviations and acronyms:**

Org. Perox. B: Organic peroxides – Type B
Org. Perox. D: Organic peroxides – Type C/D
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Skin Sens. 1: Skin sensitisation – Category 1
Repr. 1B: Reproductive toxicity – Category 1B
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
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

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