

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 27.08.2014

Revision: 27.08.2014

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

· **1.1 Product identifier**

· Trade name: **Hardener 13**

· **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** Hardening agent/ Curing agent

· **1.3 Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

Kunststoff-und-Farben-Gesellschaft mbH
An der Flurscheide 7
D-64584 Biebesheim

Tel.: +49 (0)6258-8006-0 Fax: +49 (0)6258-800670 info@KfG-Biebesheim.de

· **Informing department:** Hr. Geipert

· **1.4 Emergency telephone number:**

Poison Control Center Mainz - 24 h - +49(0)6131-19240
National Poisons Information Service (Birmingham Unit)
+44 121 507 4123

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**



GHS08 health hazard

Repr. 2 H361f Suspected of damaging fertility.



GHS09 environment

Aquatic Acute 1 H400 Very toxic to aquatic life.



GHS07

Skin Sens. 1 H317 May cause an allergic skin reaction.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

· **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



Xn; Harmful

R62: Possible risk of impaired fertility.



Xi; Irritant

R36: Irritating to eyes.



Xi; Sensitising

R43: May cause sensitisation by skin contact.



N; Dangerous for the environment

R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 27.08.2014

Revision: 27.08.2014

Trade name: Hardener 13

(Contd. of page 1)

· **Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

· **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**



GHS07 GHS08 GHS09

· **Signal word** Warning

· **Hazard-determining components of labelling:**

dicyclohexyl phthalate

dibenzoyl peroxide

· **Hazard statements**

H317 May cause an allergic skin reaction.

H361f Suspected of damaging fertility.

H400 Very toxic to aquatic life.

H412 Harmful to aquatic life with long lasting effects.

· **Precautionary statements**

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P281 Use personal protective equipment as required.

P273 Avoid release to the environment.

P321 Specific treatment (see on this label).

P363 Wash contaminated clothing before reuse.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Labelling of packages where the contents do not exceed 125 ml**

· **Hazard pictograms**



GHS07 GHS08 GHS09

· **Signal word** Warning

· **Hazard-determining components of labelling:**

dicyclohexyl phthalate

dibenzoyl peroxide

· **Hazard statements**

H317 May cause an allergic skin reaction.

H361f Suspected of damaging fertility.

H412 Harmful to aquatic life with long lasting effects.

· **Precautionary statements**

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P281 Use personal protective equipment as required.

P321 Specific treatment (see on this label).

P363 Wash contaminated clothing before reuse.

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 27.08.2014

Revision: 27.08.2014

Trade name: Hardener 13

(Contd. of page 2)

P308+P313 IF exposed or concerned: Get medical advice/attention.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

P405 Store locked up.

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.


















 • **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

3.2 Chemical characterisation: Mixtures

 • **Description:** Dibenzoyl peroxide dissolved in plasticizer

Dangerous components:

CAS: 27138-31-4 EINECS: 248-258-5 Reg.nr.: 01-2119529241-49-xxxx	Dipropylene Glycol Dibenzoate  N R51/53  Aquatic Chronic 2, H411	2.5-10%
CAS: 94-36-0 EINECS: 202-327-6 Index number: 617-008-00-0 Reg.nr.: 01-2119511472-50-xxxx	dibenzoyl peroxide  Xi R36;  Xi R43;  E R3;  O R7;  N R50/53  Self-react. B, H241;  Org. Perox. B, H241;  Aquatic Acute 1, H400;  Eye Irrit. 2, H319;  Skin Sens. 1, H317	2.5-10%
CAS: 84-61-7 EINECS: 201-545-9 Reg.nr.: 01-2119978223-34-xxxx	dicyclohexyl phthalate  Xn R62;  Xi R43 R53  Repr. 2, H361f;  Skin Sens. 1, H317;  Aquatic Chronic 3, H412	2.5-10%

 • **Additional information** For the wording of the listed risk phrases refer to section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

 • **General information** Instantly remove any clothing soiled by the product.

After inhalation

Take affected persons into the open air and position comfortably

Seek medical treatment in case of complaints.

After skin contact

Instantly wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

 • **After eye contact** Rinse opened eye for several minutes under running water. Then consult doctor.

After swallowing

Rinse the mouth with water immediately

Seek immediate medical advice.

 • **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.

 • **Information for doctor** No particular measures are known - treat according to symptoms.

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, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.

 • **For safety reasons unsuitable extinguishing agents** Water with a full water jet.

(Contd. on page 4)



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 27.08.2014

Revision: 27.08.2014

Trade name: **Hardener 13**

(Contd. of page 3)

- **5.2 Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
- **5.3 Advice for firefighters**
- **Protective equipment:** Put on breathing apparatus.
- **Additional information**
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective clothing.
Ensure adequate ventilation
- **6.2 Environmental precautions:**
Prevent material from reaching sewage system, holes and cellars.
Do not allow to enter the ground/soil.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose of the material collected according to regulations.
- **6.4 Reference to other sections** See Section 13 for information on disposal.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
The usual precautionary measures for handling chemicals must be observed.
- **Information about protection against explosions and fires:** Keep ignition sources away - Do not smoke.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and containers:**
Store only in the original container.
Keep containers securely closed and dry, store at 5 - 25 °C.
- **Information about storage in one common storage facility:**
Do not store together with oxidising and acidic materials.
- **Further information about storage conditions:** Keep container tightly sealed.
- **Storage class 10**
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 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:**

131-11-3 dimethyl phthalate (25-50%)

WEL (Great Britain)	Short-term value: 10 mg/m ³ Long-term value: 5 mg/m ³
---------------------	--------------------------------------------------------------------------------

· DNELs

27138-31-4 Dipropylene Glycol Dibenzoate

Dermal	DNEL - Arbeiter / worker	170 mg/kg/bw/d (Human)
Inhalative	DNEL Langzeit / long-term	8.8 mg/m ³ (Human)

94-36-0 dibenzoyl peroxide

Oral	DNEL Langzeit Verbraucher / Long-term consumer	1.65 mg/kg/bw/d (Human)
Dermal	DNEL - Arbeiter / worker	6.6 mg/kg/bw/d (Human)

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 27.08.2014

Revision: 27.08.2014

Trade name: Hardener 13

(Contd. of page 4)

Inhalative	DNEL Langzeit Verbraucher / Long-term consumer	3.3 mg/kg/bw/d (Human)
	DNEL Langzeit / long-term	11.75 mg/m ³ (Human)

· **PNECs**

27138-31-4 Dipropylene Glycol Dibenzoate

PNEC Langzeit Wasser / Long-term water 0.0037 mg/l (-)

94-36-0 dibenzoyl peroxide

PNEC Langzeit Wasser / Long-term water 0.000602 mg/l (-)

84-61-7 dicyclohexyl phthalate

PNEC Langzeit Wasser / Long-term water 0.00362 mg/l (-)

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

· **8.2 Exposure controls**

· **Personal protective equipment**

· **General protective and hygienic measures**

Wash hands during breaks and at the end of the work.

The usual precautionary measures should be adhered to general rules for handling chemicals.

· **Breathing equipment:** Use breathing protection in case of insufficient ventilation.

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



Filter AX

· **Protection of hands:**



Only use chemical-protective gloves with CE-labelling of category III.

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

· **Material of gloves**

Butyl rubber, BR

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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Recommended thickness of the material: ≥ 0.5 mm

· **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.

Value for the permeation: Level ≤ 3

· **As protection from splashes gloves made of the following materials are suitable:** PVC gloves

· **Not suitable are gloves made of the following materials:**

Strong gloves

Leather gloves

· **Eye protection:**



Tightly sealed safety glasses.

(Contd. on page 6)



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

Printing date 27.08.2014

Revision: 27.08.2014

Trade name: **Hardener 13**· **Body protection:** Protective work clothing.

(Contd. of page 5)

SECTION 9: Physical and chemical properties· **9.1 Information on basic physical and chemical properties**· **General Information**· **Appearance:**

· **Form:** Fluid
 · **Colour:** Cloudy
 · **Odour:** Weak, characteristic

· **Change in condition**

· **Melting point/Melting range:** Not determined
 · **Boiling point/Boiling range:** 283 °C

· **Flash point:** 146 °C· **Ignition temperature:** 555 °C· **Self-inflammability:** Product is not selfigniting.· **Density at 20 °C** ca. 1 g/cm³ (DIN 51757)· **Solubility in / Miscibility with**· **Water:** Not miscible or difficult to mix· **9.2 Other information** No further relevant information available.**SECTION 10: Stability and reactivity**· **10.1 Reactivity**· **10.2 Chemical stability**· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.· **10.3 Possibility of hazardous reactions** none, if used as directed· **10.4 Conditions to avoid** No further relevant information available.· **10.5 Incompatible materials:** strong oxidizing agents· **10.6 Hazardous decomposition products:** No dangerous decomposition products known**SECTION 11: Toxicological information**· **11.1 Information on toxicological effects**· **Acute toxicity:**· **LD/LC50 values that are relevant for classification:****27138-31-4 Dipropylene Glycol Dibenzoate**

Oral	LD50	3914 mg/kg (rat)
	NOAEL	1000 mg/kg (rat) (90 d)
Dermal	LD50	> 2000 mg/kg (rat)
Inhalative	LC50/4 h	> 200 mg/l (rat)

94-36-0 dibenzoyl peroxide

Oral	LD50	>5000 mg/kg (rat)
	NOAEL	1000 mg/kg (rat) (29 d, OECD 422)
Inhalative	LC50	> 24.3 mg/m ³ (rat)

84-61-7 dicyclohexyl phthalate

Oral	LD50	>2000 mg/kg (rat)
	NOAEL	50 mg/kg (rat) ((90d, OECD 408))

(Contd. on page 7)



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 27.08.2014

Revision: 27.08.2014

Trade name: **Hardener 13**

(Contd. of page 6)

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Irritant effect.
- **Sensitisation:** Sensitization possible by skin contact.
- **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:
Irritant
- **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
Repr. 2

SECTION 12: Ecological information

· 12.1 Toxicity

· Aquatic toxicity:

27138-31-4 Dipropylene Glycol Dibenzoate

Daphnientoxizität / Daphnia toxicity	19.3 mg/l (daphnia) (EC50 (48h))
Fischttoxizität / Fish toxicity	3.7 mg/l (fish) (LC50 (96h))

94-36-0 dibenzoyl peroxide

Algentoxizität / Algae toxicity	0.0711 mg/l (Pseudokirchneriella subcapitata) (EC50 (72h))
Bakterientoxizität / Bacteria toxicity	35 mg/l (Belebschlambakterien) ((30 min, OECD 209))
Daphnientoxizität / Daphnia toxicity	0.110 mg/l (Daphnia magna) (EC50 (48h))
Fischttoxizität / Fish toxicity	0.0602 mg/l (Onchorhynchus mykiss) (LC50 (96h))

84-61-7 dicyclohexyl phthalate

Algentoxizität / Algae toxicity	> 2 mg/l (Pseudokirchneriella subcapitata) (EC50 (72h), OECD 201)
Fischttoxizität / Fish toxicity	> 2 mg/l (Oryzias Latipes) (LC50 (96h), OECD 203)
NOEC	> 2 mg/l (Pseudokirchneriella subcapitata) (OECD 201)

- **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.
- **Ecotoxicological effects:** Not determined
- **Remark:** 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 bodies or sewage system.
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** Must be specially treated under adherence to official regulations.

(Contd. on page 8)

GB

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

Printing date 27.08.2014

Revision: 27.08.2014

Trade name: Hardener 13

(Contd. of page 7)

· European waste catalogue

08 00 00	WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS
08 02 00	wastes from MFSU of other coatings (including ceramic materials)
08 02 99	wastes not otherwise specified

· Uncleaned packagings:
· Recommendation: Disposal must be made according to official regulations.

SECTION 14: Transport information
· 14.1 UN-Number
· ADR, IMDG, IATA

UN3082

· 14.2 UN proper shipping name
· ADR

Void

· IMDG

 ENVIRONMENTALLY HAZARDOUS SUBSTANCE,
LIQUID, N.O.S. (dibenzoyl peroxide), MARINE
POLLUTANT

· IATA

 ENVIRONMENTALLY HAZARDOUS SUBSTANCE,
LIQUID, N.O.S. (dibenzoyl peroxide)

· 14.3 Transport hazard class(es)
· ADR

· Class

9 (M6) Miscellaneous dangerous substances and articles.

· Label

9

· IMDG

· Class

9 Miscellaneous dangerous substances and articles.

· Label

9

· IATA

· Class

9 Miscellaneous dangerous substances and articles.

· Label

90

· 14.4 Packing group
· ADR, IMDG, IATA

III

· 14.5 Environmental hazards:
· Marine pollutant:

Yes

Symbol (fish and tree)

· Special marking (ADR):

Symbol (fish and tree)

(Contd. on page 9)



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

Printing date 27.08.2014

Revision: 27.08.2014

Trade name: **Hardener 13**

(Contd. of page 8)

· Special marking (IATA):	Symbol (fish and tree)
· 14.6 Special precautions for user	Warning: Miscellaneous dangerous substances and articles.
· Kemler Number:	90
· EMS Number:	F-A,S-F
· 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	

· ADR	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 1000 ml
· Transport category	3
· Tunnel restriction code	E

· IMDG	
· Limited quantities (LQ)	5 L
· Excepted quantities (EQ)	Code: E1
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	-

SECTION 15: Regulatory information

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

SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Changes made since last issue dated 11.02.2014 at the following points: *

· **Relevant phrases**

- H241 Heating may cause a fire or explosion.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H361f Suspected of damaging fertility.
- H400 Very toxic to aquatic life.
- H411 Toxic to aquatic life with long lasting effects.
- H412 Harmful to aquatic life with long lasting effects.
- R3 Extreme risk of explosion by shock, friction, fire or other sources of ignition.
- R36 Irritating to eyes.
- R43 May cause sensitisation by skin contact.
- R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R53 May cause long-term adverse effects in the aquatic environment.
- R62 Possible risk of impaired fertility.
- R7 May cause fire.

(Contd. on page 10)



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

Printing date 27.08.2014

Revision: 27.08.2014

Trade name: Hardener 13

(Contd. of page 9)

· Department issuing data specification sheet:*IGG-AD Ingenieurbüro für Gefahrstoff- und Gefahrgutberatung**Bismarckstraße 10**D-68623 Lampertheim**Fax: 0049-(0)6206-58422 <http://www.igg-ad.de> info@igg-ad.de***· Contact:***Dr. U. Prinz (u.prinz@igg-ad.de)**Dipl.-Chem. H. Hinse (heidrun.hinse@igg-ad.de)***· 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)**IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)**ICAO: International Civil Aviation Organisation**ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)**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**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**Self-react. B: Self-Reactive Substances and Mixtures, Type B**Org. Perox. B: Organic Peroxides, Type B**Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2**Skin Sens. 1: Sensitisation - Skin, Hazard Category 1**Repr. 2: Reproductive toxicity, Hazard Category 2**Aquatic Acute 1: Hazardous to the aquatic environment - Acute Hazard, Category 1**Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2**Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3***· * Data compared to the previous version altered.**

GB