

EC Safety Data Sheet

Calidutherm[®]

Xi



Irritant

TERRA
CALIDUUS^{GmbH}

Manufacturer'
dornburger zement
GmbH & Co KG
In der Oberaue
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Risk phrases

- **R 38** Irritating to skin
- **R 41** Risk of serious eye damage

Safety phrases

- **S 2** Keep out of the hands of children
- **S 22** Do not breathe dust
- **S 24** Avoid contact with skin
- **S 26** In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
- **S 37/39** Wear suitable gloves and eye/face protection
- **S 46** If swallowed, seek medical advice immediately and show this container or label

1. Identification of the substance/preparation and of the company/undertaking**1.1 Identification of the product**

Product name: Calidutherm®

1.2 Use of the preparation

Pressing material for ground heat sensors to VDI 4640

1.3 Manufacturer / Supplier identification

Manufacturer: dornburger zement GmbH & Co. KG
 Street: In der Oberaue
 Postcode / Town: 07778 Dorndorf-Steudnitz
 Country: Germany
 Phone: 0049 / (0)36427 – 8610
 Fax: 0049 / (0)36427 – 22295
 Information available from: Quality Assurance Department
 Phone: 0049 / (0)36427 – 861140

1.4 Emergency information

Toxin information from Mainz University Hospital
 Phone: 0049 / (0)6131 – 19 24 0

2. Composition/Information on components**2.1 Chemical characterisation**

Mixture of:
 - Aluminium silicates of naturally ground clay
 - Blast furnace cement to EN 197-1 CEM III/B 32,5 N LH
 (Mixture of Portland cement clinker, foundry sand and sulphate carrier)
 - Quartz sand

2.2 Dangerous contents

Product name	CAS number	EINECS number	Content	Code letter	R phrases
Portland cement clinker	65997-15-1	266-043-4	1 - 20% w/w	Xi irritant	R38; R41 (see below)

3. Possible hazards**3.1 Hazards identification**X_i Irritant**3.2 Special hazard information for people**

R38 Irritating to skin
 R41 Risk of serious damage to eyes

3.3 Additional information for people and the environment

When mixed with water the material can cause serious skin damage in the event of lengthy contact. If it has a powdery consistency, the product contains fine quartz sand (avoid dust development). Lengthy inhalation in high concentrations may damage the respiratory tract.

3.4 Other information

The material is low in chromate since the content of sensitising hexavalent chromium in the cement is less than 2 ppm.

4. First aid measures**4.1 Inhalation**

Take patient into fresh air. Seek medical advice if problems persist.

4.2 Skin contact

Remove saturated clothing. Wash skin immediately with soap and water. Seek medical advice if problems persist.

4.3 Eye contact Rinse the eyes under running water holding the eyelid open (for approx. 10 minutes). Do not rub the eyes dry because additional cornea damage may be caused by mechanical stress. Always seek medical attention.

4.4 Ingestion Wash out mouth if the patient is conscious and give lots of water to drink. Do not cause vomiting. Seek medical attention.

5. Fire fighting measures

The product is not inflammable either in the condition as supplied or when mixed ready for use. Extinguishing agents and fire fighting measures are to be tailored to the surrounding fire.

6. Accidental release measures

6.1 Personnel measures See instructions for safe handling in point 7.1. If necessary protect leaked material with tarpaulins to prevent it blowing away.

6.2 Environmental protection measures As for potential water polluting class 1.

6.3 Cleaning / Mopping up procedure Mop up (dry) powder mechanically, checking wind direction if necessary and minimise dropping height when rearranging. Sweep up non-dry residue. Mop up mixer mortar mechanically, leave to cure on a foil surface or in a vessel and dispose of as set out in point 13.

7. Handling and storage

7.1 Handling
 Instructions for safe handling: Avoid dust development. Avoid contact with skin and eyes. Avoid skin contact with material that has been mixed with water by using protective clothing.

Fire and explosion protection: Not applicable.

7.2 Storage
 Requirements on storage areas and containers: Protect from moisture in sealed containers and enclosed areas; dust extraction in accordance with Federal Emissions Protection Law and Technical Regulations for Air.

Storage information: Not applicable.

Other details for storage: Not applicable.

Storage class: Not applicable.

8. Exposure controls and personal protection

8.1 Exposure limit values

CAS No.	Designation	Type of limit value	Value	Unit
14808-60-7	Quartz (dust)	MWC	0.15	mg/m ³ (A)
65997-15-1	Portland cement (dust)	MWC	5	mg/m ³ (E)
-	General dust	General dust limit value	3	mg/m ³ (A)
			10	mg/m ³ (E)

The specified values are taken from the current lists (for example TRGS 900)¹. (E): Fraction that can be inhaled (A): Fraction that can pass through the alveoli

These figures refer to the currently applicable MAC list. In countries other than Germany the applicable local regulations as regards maximum workplace concentrations have to be observed.

8.2 Personal safety equipment

General protection and hygiene measures:

Avoid contact with the eyes and skin. Remove saturated clothing. Do not eat, drink or smoke during work. Wash hands before breaks and at the end of work.

Respiratory protection:

Use a particulate filtering half-face mask FFP1 (white) if the exposure limit values are exceeded (possible, for example when mixing) (see information sheet BRG 190²).

Hand protection

Use nitrile-saturated cotton gloves with a CE symbol (see information sheet BGR 195²). Do not exceed the maximum wearing time. Leather gloves are not suitable as a result of their water-permeability.

Eye protection:

Use tight-fitting goggles in the event of dust development or if there is a risk of splashing.

Skin protection:

Protect skin using a skin protection plan as described in BGR 197². In particular, use skin care gel after finishing work.

Body protection:

Wear closed, long-sleeved protective clothing and stout footwear.

8.3 Limiting and monitoring environmental exposure

Using state of the art methods.

9. Physical and chemical properties

9.1 General information

Form: powder
 Colour: grey
 Odour: odourless

9.2 Safety-relevant data

	Value / Range	Unit / Remarks
pH value (T=20°C)	11.0 – 12.7	In mixed form for proper usage
Boiling point / Boiling range	Not applicable	
Flash point	Not applicable	Solid material not inflammable
Explosion risk	Not explosive	
Fire propagation properties	None	
Density (T=20°C)	2.5 – 3.0	g/cm ³

No further details of pc properties under RL 91/155/EEC have been given since they are not relevant.

10. Stability and reactivity

All information assumes that the product is used for the purpose for which it is designed.

10.1 Conditions to be avoided Ingress of moisture

10.2 Substances to be avoided Not applicable

10.3 Hazardous decomposition products Not applicable

11. Toxicological information

11.1 Toxicological tests

Acute toxicity: Animal experiments in in-vivo and in-vitro tests showed no signs of acute dermal toxicity.

Specific symbols in animal testing: Not applicable.

Irritation / Caustic effect The product irritates the skin and mucous membranes. Highly irritative to the eyes, risk of serious eye damage.

11.2 Experience from practice

Other observations: When mixed with water, the product can cause serious skin damage after lengthy contact. Simultaneous mechanical stresses on the skin can increase these effects.

Sensitising effect: The material is low in chromate since the content of sensitising hexavalent chromium in the cement is less than 2 ppm.

12. Ecological information

12.1 Eco-toxic effects None known.

12.2 Mobility Not applicable since it is an inorganic mineral material.

12.3 Persistence and degradability Not applicable since it is an inorganic mineral material.

12.4 Bio-accumulation Not applicable since it is an inorganic mineral material.

12.5 Other harmful effects None known.

13. Disposal considerations

13.1 Product (unused residue)

Recommendation Mop up whilst dry. Mark container, reuse if possible (do not exceed use-by date). For disposal, leave to cure with water and dispose as described in point 13.2.

13.2 Product (after the ingress of water, cured)

Recommendation Dispose of as specified by local regulations. Dispose of the hardened product like concrete waste and concrete sludge.

EWC waste code Under AVV: 101314 (concrete waste or concrete sludge) or 170101 (concrete).

13.3 Contaminated packaging

Recommendation Empty packaging completely and send for recycling. See points 7.1 and 8.2 for safe handling instructions.

14. Transport information

The product is not a dangerous substance in the sense of the transport regulations.

15. Regulatory information

15.1 Labelling

(under §5 of the Dangerous Substances Regulation together with EU Directives 1999/45/EC and 67/548/EEC¹)

Code letter and hazard code:	X _i	Irritant
R phrases:	R38 R41	Irritating to skin Risk of serious damage to eyes
S phrases:	S22 S24 S26 S37/ S39	Do not breathe dust Avoid contact with skin In case of contact with the eyes, rinse with plenty of water and seek medical advice Wear suitable gloves and eye/face protection
If the product is available to everybody, also:	S2 S46	Keep out of the reach of children If swallowed, seek medical advice immediately and show this container or label
Miscellaneous	GISCODE:	ZP1 (products that contain cement, low in chromate)

15.2 National regulations

Employment restrictions	None
Potential water-polluting class	WGK 1 by supplier's own assessment pursuant to Potentially Water-Polluting Substance Regulation dated 17.05.1999 (as a result of the Portland cement clinker content in the blast furnace cement)
Other regulations, restrictions and prohibition regulations	Dangerous Substances Regulation (GefStoffV) ¹ Chemical Prohibition Regulation (ChemVerbotsV) Technical regulations for dangerous substances ¹ : TRGS 613: Substitute substances, substitution methods and restrictions on the use of cements and cement preparations that contain chromate
Storage class:	VCI storage class 13 (non-flammable solids)

16. Other details

Sources

- ¹ <http://www.baua.de/prax/>
- ² <http://www.hvbg.de/d/pages/prae/v/vorschr/index.html> or <http://www.carl-heymanns-verlag.de/servlet/PB/menu/-1/index.html>

The above information is based on our current knowledge. However, it does not represent any assurance of product properties and does not provide grounds for any contractual legal relationship. Further information is provided in the technical data sheet for the product. Department that issued the data sheet: See point 1.3.