SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

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<th>Material number</th>
<th>PTCR STL 1130-1400°C (3.5 mm), 1200/Box</th>
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</tbody>
</table>

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product identifier

Material number : 1400605

Trade name : 1400605

PTCR STL 1130-1400°C (3.5 mm), 1200/Box

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the Substance/Mixture : Ceramic coating suited for firing, for glass and ceramics.

1.3 Details of the supplier of the safety data sheet

Company : Ferro GmbH

Gutleutstraße 215

60327 Frankfurt am Main

Telephone : +4969271160

Telefax : +49692711633

E-mail address : sdb@ferro.com

1.4 Emergency telephone number

In-Country Number : +(44)-870-8200418

CHEMTREC Global Number : +(1)-703-527-3887(Call Collect)

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

This document has been developed with the exclusive purpose of complying with the obligation of informing the supply chain according to article 32 of the Reach regulation, because this material is not classified and does not require a material safety data sheet.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

Additional Labelling:

EUH210 .Safety data sheet available on request.
2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher. Prolonged inhalation of fine quartz dust may cause silicosis when the maximum admissible concentration at the workplace is exceeded. Symptoms of a silicosis may be cough and chronic inflammation of the respiratory system. There is some evidence of increased risk of lung cancer in people who suffer from silicosis.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Chemical nature: inorganic salt
silicatic material

Hazardous components

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No.</th>
<th>EC-No. Registration number</th>
<th>Classification (REGULATION (EC) No 1272/2008)</th>
<th>Concentration (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>barium carbonate</td>
<td>513-77-9 / 208-167-3 /</td>
<td>Acute Tox. 4; H302</td>
<td>&lt; 10</td>
<td></td>
</tr>
<tr>
<td>Substances with a workplace exposure limit:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>talc</td>
<td>14807-96-6 / 238-877-9 /</td>
<td></td>
<td>&gt;= 10 - &lt; 20</td>
<td></td>
</tr>
<tr>
<td>quartz</td>
<td>14808-60-7 / 238-878-4 /</td>
<td></td>
<td>&lt; 10</td>
<td></td>
</tr>
</tbody>
</table>

For explanation of abbreviations see section 16.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General advice: Do not leave the victim unattended.

If inhaled: If unconscious place in recovery position and seek medical advice.
            If symptoms persist, call a physician.

In case of skin contact: Take off contaminated clothing and shoes immediately.
                         Wash off with soap and plenty of water.

In case of eye contact: Flush eyes with water as a precaution.
                        Remove contact lenses.
                        Protect unharmed eye.
                        Keep eye wide open while rinsing.
                        If eye irritation persists, consult a specialist.
If swallowed: Clean mouth with water and drink afterwards plenty of water. Keep respiratory tract clear. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.

4.2 Most important symptoms and effects, both acute and delayed
Symptoms: None known.
Risks: None known.

4.3 Indication of any immediate medical attention and special treatment needed
Treatment: The first aid procedure should be established in consultation with the doctor responsible for industrial medicine.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media
Suitable extinguishing media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media: High volume water jet

5.2 Special hazards arising from the substance or mixture
Hazardous combustion products: No hazardous combustion products are known

5.3 Advice for firefighters
Special protective equipment for firefighters: In the event of fire, wear self-contained breathing apparatus.
Further information: Standard procedure for chemical fires. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Personal precautions: Use personal protective equipment. Ensure adequate ventilation. Evacuate personnel to safe areas.
6.2 Environmental precautions

Environmental precautions: No special environmental precautions required.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up:
- Pick up and arrange disposal without creating dust.
- Sweep up and shovel.
- Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For personal protection see section 8.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling:
- For personal protection see section 8.
- No special handling advice required.
- Smoking, eating and drinking should be prohibited in the application area.

Advice on protection against fire and explosion:
- Avoid dust formation. Provide appropriate exhaust ventilation at places where dust is formed.

Hygiene measures:
- General industrial hygiene practice.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers:
- Keep container tightly closed in a dry and well-ventilated place. Electrical installations / working materials must comply with the technological safety standards.

Advice on common storage:
- No special restrictions on storage with other products.
- No materials to be especially mentioned.

Other data:
- No decomposition if stored and applied as directed.

7.3 Specific end use(s)

Specific use(s):
- Consult the technical guidelines for the use of this substance/mixture.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Occupational Exposure Limits
**Components** | **CAS-No.** | **Value type (Form of exposure)** | **Control parameters** | **Expressed as** | **Basis**
--- | --- | --- | --- | --- | ---
Talc | 14807-96-6 | TWA (Respirable) | 1 mg/m³ | GB EH40 | 

**Further information**

For the purposes of these limits, respirable dust and inhalable dust are those fractions of airborne dust which will be collected when sampling is undertaken in accordance with the methods described in MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust. Talc is defined as the mineral talc together with other hydrous phyllosilicates including chlorite and carbonate materials which occur with it, but excluding amphibole asbestos and crystalline silica. The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg.m⁻³ 8-hour TWA of inhalable dust or 4 mg.m⁻³ 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limit. Most industrial dusts contain particles of a wide range of sizes. The behaviour, deposition and fate of any particular particle after entry into the human respiratory system and the body response that it elicits, depend on the nature and size of the particle. HSE distinguishes two size fractions for limit-setting purposes termed ‘inhalable’ and ‘respirable’. Inhalable dust approximates to the fraction of airborne material that enters the nose and mouth during breathing and is therefore available for deposition in the respiratory tract. Respirable dust approximates to the fraction that penetrates to the gas exchange region of the lung. Fuller definitions and explanatory material are given in MDHS14/3. Where dusts contain components that have their own assigned WEL, all the relevant limits should be complied with. Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used.

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<th><strong>Expressed as</strong></th>
<th><strong>Basis</strong></th>
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<tr>
<td>TWA (Respirable dust)</td>
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### 8.2 Exposure controls

**Engineering measures**

No data available

**Personal protective equipment**

Eye protection: Safety glasses

Hand protection
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</table>

**Remarks**

: For prolonged or repeated contact use protective gloves.

**Skin and body protection**

: Protective suit

**Respiratory protection**

: No personal respiratory protective equipment normally required.

**Protective measures**

: Wear suitable protective equipment. When using do not eat, drink or smoke.

**Environmental exposure controls**

**General advice**

: No special environmental precautions required.

---

### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

#### 9.1 Information on basic physical and chemical properties

**Appearance**

: pellets

**Colour**

: green

**Odour**

: characteristic

**Odour Threshold**

: No data available

**pH**

: Not applicable

**Melting point/range**

: No data available

**Boiling point/boiling range**

: Not applicable

**Flash point**

: Not applicable

**Evaporation rate**

: Not applicable

**Flammability (solid, gas)**

: No data available

**Burning rate**

: No data available

**Auto-ignition temperature**

: No data available

**Upper explosion limit**

: No data available

**Lower explosion limit**

: Not applicable

**Vapour pressure**

: No data available

**Relative vapour density**

: Not applicable

**Relative density**

: No data available
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<th>10.2 Chemical stability</th>
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<tbody>
<tr>
<td>No decomposition if stored and applied as directed.</td>
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</tbody>
</table>

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<tr>
<th>10.3 Possibility of hazardous reactions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazardous reactions : No hazards to be specially mentioned.</td>
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</tbody>
</table>

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<tr>
<th>10.4 Conditions to avoid</th>
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<tbody>
<tr>
<td>Conditions to avoid : No data available</td>
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</table>

<table>
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<tr>
<th>10.5 Incompatible materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Materials to avoid : No data available</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>10.6 Hazardous decomposition products</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazardous decomposition products : Stable under normal conditions.</td>
</tr>
</tbody>
</table>

9.2 Other information
Refractive index : Not applicable

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity
Stable under recommended storage conditions.
No decomposition if stored and applied as directed.

10.2 Chemical stability
No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions
Hazardous reactions : No hazards to be specially mentioned.

10.4 Conditions to avoid
Conditions to avoid : No data available

10.5 Incompatible materials
Materials to avoid : No data available

10.6 Hazardous decomposition products
Hazardous decomposition products : Stable under normal conditions.
SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity
Not classified based on available information.

**Product:**
Acute oral toxicity : Remarks: No data available

Acute toxicity estimate: > 2.000 mg/kg
Method: Calculation method

Acute inhalation toxicity : Remarks: No data available

Acute dermal toxicity : Remarks: No data available

**Components:**
barium carbonate:
Acute oral toxicity : Acute toxicity estimate: 500 mg/kg
Method: Converted acute toxicity point estimate

Skin corrosion/irritation
Not classified based on available information.

**Product:**
Remarks: According to the classification criteria of the European Union, the product is not considered as being a skin irritant.

**Components:**
barium carbonate:
Remarks: According to the classification criteria of the European Union, the product is not considered as being a skin irritant.

Serious eye damage/eye irritation
Not classified based on available information.

**Product:**
Remarks: According to the classification criteria of the European Union, the product is not considered as being an eye irritant.

**Components:**
barium carbonate:
Species: Rabbit
Exposure time: 1 h
Method: OECD Test Guideline 405
Result: No eye irritation

Remarks: According to the classification criteria of the European Union, the product is not considered as being an eye irritant.

**Respiratory or skin sensitisation**
Skin sensitisation: Not classified based on available information.
Respiratory sensitisation: Not classified based on available information.

**Product:**
Remarks: No data available

**Components:**
barium carbonate:
Remarks: No data available

**Germ cell mutagenicity**
Not classified based on available information.

**Carcinogenicity**
Not classified based on available information.

**Reproductive toxicity**
Not classified based on available information.

**STOT - single exposure**
Not classified based on available information.

**STOT - repeated exposure**
Not classified based on available information.

**Aspiration toxicity**
Not classified based on available information.

**Further information**

**Product:**
Remarks: No data available

**Components:**
barium carbonate:
Remarks: No data available
12.1 Toxicity

**Product:**
Ecotoxicology Assessment
Acute aquatic toxicity: This product has no known ecotoxicological effects.
Chronic aquatic toxicity: This product has no known ecotoxicological effects.

**Components:**
barium carbonate:
Toxicity to fish: LC50 (Gambusia affinis (Mosquito fish)): 6.950 mg/l
Exposure time: 96 h

talc:
Toxicity to fish: LC50 (Fish): 100.000 mg/l
Exposure time: 96 h

12.2 Persistence and degradability

**Product:**
Biodegradability: Remarks: No data available

**Components:**
barium carbonate:
Biodegradability: Remarks: No data available

talc:
Biodegradability: Remarks: No data available

quartz:
Biodegradability: Remarks: No data available

12.3 Bioaccumulative potential

**Product:**
Bioaccumulation: Remarks: No data available

**Components:**
barium carbonate:
Bioaccumulation: Remarks: No data available

talc:
12.4 Mobility in soil

**Product:**
- Distribution among environmental compartments: Remarks: No data available

**Components:**
- **quartz:**
- Distribution among environmental compartments: Remarks: No data available

12.5 Results of PBT and vPvB assessment

**Product:**
- Assessment: This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

**Product:**
- Additional ecological information: Remarks: No data available
  - There is no data available for this product.

**Components:**
- **barium carbonate:**
- Additional ecological information: Remarks: No data available
  - There is no data available for this product.
SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product:
Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging:
Empty remaining contents. Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14: TRANSPORT INFORMATION

14.1 UN number
Not regulated as a dangerous good

14.2 UN proper shipping name
Not regulated as a dangerous good

14.3 Transport hazard class(es)
Not regulated as a dangerous good

14.4 Packing group
Not regulated as a dangerous good

14.5 Environmental hazards
Not regulated as a dangerous good

14.6 Special precautions for user
Remarks:
Not classified as dangerous in the meaning of transport regulations.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Ship type: N/A
Pollution category: N/A

SECTION 15: REGULATORY INFORMATION

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

International Chemical Weapons Convention (CWC): Neither banned nor restricted
Schedules of Toxic Chemicals and Precursors: Neither banned nor restricted

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances: Neither banned nor restricted
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preparations and articles (Annex XVII)

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals : Neither banned nor restricted

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).

REACH - List of substances subject to authorisation (Annex XIV) : Neither banned nor restricted

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Neither banned nor restricted

Regulation (EC) No 850/2004 on persistent organic pollutants : Neither banned nor restricted


The components of this product are reported in the following inventories:

REACH : This mixture contains only ingredients which have been subject to a pre-registration according to Regulation (EC) No. 1907/2006 (REACH).

CH INV : Not in compliance with the inventory

TSCA : On TSCA Inventory

DSL : All components of this product are on the Canadian DSL.

AICS : On the inventory, or in compliance with the inventory

NZIoC : On the inventory, or in compliance with the inventory

ENCS : Not in compliance with the inventory

ISHL : Not in compliance with the inventory

KECI : Not in compliance with the inventory

PICCS : Not in compliance with the inventory

IECSC : On the inventory, or in compliance with the inventory

Inventories
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AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECl (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA), CH INV (Switzerland), MY INV (Malaysia), TR INV (Turkey), TW INV (Taiwan)

15.2 Chemical Safety Assessment
Not applicable

SECTION 16: OTHER INFORMATION

Full text of H-statements
H302 : Harmful if swallowed.

Full text of other abbreviations
Acute Tox. : Acute toxicity

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.