


P-D Refractories CZ a.s.  Nádražní 218 679 63 Velké Opatovice	MATERIAL SAFETY DATA SHEET Pursuant to Regulation of the European Parliament and of the Council (EC) no 1907/2006 (REACH)	
	Date of issue: 1 January 2006	Page: 1/7
	Revision date: 20 August 2013	Rev. 3
	Product name: Dense low cement castables (content of SiO₂ 93 - 98 %) Product group: PROCAST Quality class: ZBC QC	

SECTION 1. SUBSTANCE/MIXTURE AND MANUFACTURER IDENTIFICATION

1.1 Product identifier:

Business name: Dense low cement castables (content of SiO₂ 93 - 98 %)

CAS no: n/a (mixture)

EC (EINECS) no: n/a (mixture)

Index no: n/a (mixture)

REACH registration no: N/A for mixtures

Other names: None.

1.2 Designed applications of substance or mixture and non-recommended applications:

Building industry – dry castables mixture for manufacture of dense refractory monoliths or prefabricates.

1.3 Detailed data of material safety data sheet supplier:

Manufacturer: P-D Refractories CZ a.s.

Address: Nádražní 218, 679 63 Velké Opatovice

Phone: +420 516 493 111, Fax: +420 516 477 338

Email address of competent person responsible for material safety data sheet: kovar@mslz.cz

1.4 Emergency phone:

Toxicological information centre -+420 224919293, 224915402

Na Bojišti 1, 128 08 PRAGUE 2

SECTION 2. HAZARD IDENTIFICATION

2.1 Classification of substance or mixture:

The product is not classified as hazardous pursuant to Dangerous Preparation Directive (1999/45/EC) nor pursuant to Regulation of the European Parliament and of the Council (EC) no 1272/2008 CLP.

2.2 Identification elements:

The product is not subject to compulsory identification.

2.3 Other hazards:

None are specified

SECTION 3. COMPOSITION/COMPONENT INFORMATION

3.1. Description and characteristics:

Dry castables mixture with Portland cement and with grog based on quartzite processed by vibration after mixing with water. It contains polypropylene fibers for faster and safer drying. The castables mixture contains 96% of silicon dioxide – silica (CAS: 14808-60-7, EC:238-878-4).

3.2. Substances dangerous for health or the environment:

Name of component	Concentration % mass	CAS EC Index number Registration number	Classification acc. 67/548 EEC	Classification acc. 1272/2008/EC
Chemical substances contained in portland cement [Cement acc. ČSN 197-1]	max. 5	65997-15-1 266-043-4 Not specified Not specified 2)	Xi; R36/37/38 1)3)	Eye Irrit. 2, H319 STOT SE 3, H335 Skin Irrit.2, H315 1)4)

Notes:

- 1) Full wording of the R and H phrases and classification symbols is included in section 16.
- 2) Exception from registration liability in compliance with Article 2 (7) (b): 7. Chemically unaltered natural substances - cement clinker.
- 3) Not classified in Annex I to Directive 67/548/EEC, manufacturer 's classification is used.
- 4) Not classified in Annex VI to Regulation 1272/2008/EC, manufacturer 's classification is used.

Substances with workplace exposure limits:

See data in 8.1.

Persistent, bio-accumulative and toxic, highly persistent and highly bio-accumulative substances:

The product does not contain PBT and vPvB type substances.

SECTION 4. FIRST AID INSTRUCTIONS

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Quality class: **ZBC QC****4.1 First aid description:****4.1.1 First aid instructions:**

General instructions: The resulting dust in increased quantities may irritate mucous membrane, conjunctiva and the respiratory tract. Observe rules of work hygiene when working with this material. In the case of severe symptoms seek medical advice.

Immediate medical attention is not necessary.

Inhalation: Move the exposed person to the fresh air. Rinse the oral cavity with water and clear the nose to remove the inhaled dust.

Skin contact: Remove the exposed person away from the source of contamination. Remove contaminated clothing and boots, clean both before further use. Quickly and carefully wash the exposed skin with warm water and soap or other skin cleansing agents and treat with a suitable cream.

Eye contact: Wash with plenty of lukewarm water. After rinsing use a suitable eye lotion. Wash the eye surroundings with water too. In the case of eye injury seek medical attention.

Swallowing: Never evoke vomiting in unconscious person! Do not serve drinks to unconscious person! Rinse the mouth with water carefully, drink a couple of glasses of water.

- 4.1.2 Additional data:** a) Immediate medical attention is recommended in the case of swallowing.
b) In the case of inhalation moving the exposed person to fresh air is recommended.
c) Remove contaminated parts of clothing.
d) Recommended personal protective means to persons providing first aid: See section 8

4.2 Major acute and delayed symptoms and effects:

Respiratory tract irritation.

It may cause skin irritation.

Exposed eye irritation.

Temporary irritation of the digestive tract including gastric nausea and sickness after swallowing the dust.

4.3 Instruction concerning immediate medical attention and special treatment:

Visit a doctor in the case of nausea.

SECTION 5. FIRE-FIGHTING MEASURES

5.1 Extinguishing agents: **Suitable:** Non-flammable. Packaging material used may be flammable, use appropriate extinguishing agent depending on the surrounding fire.

Non-suitable: None are specified.

5.2 Special hazards following from the substance or mixture: None are known.

5.3 Instructions for fire-fighters: Use equipment depending on the surrounding fire. Non-flammable material.

SECTION 6. PRECAUTIONS IN CASE OF ACCIDENTAL LEAK**6.1 Precautions for personnel protection, protective means and emergency procedures:****6.1.1 For staff except for emergency intervention staff**

Restrict unauthorised access to the exposed area until emergency elimination. In the case of large leaks secure the area against unauthorised access.

6.1.2 For emergency intervention staff

Prevent further dust spread through the air. In the case of dusty environment use personal protective equipment (see section 8). Other special precautions are not necessary.

6.2 Environment protection measures: No acute negative effects on the environment. Prevent further dust spread through the air. Place the devalued product in specified waste collection containers.

6.3 Methods and materials for leak minimisation and cleaning: Sweep up the spilled product and place in specified waste collection containers. Prevent excessive dust formation during cleaning. Other special precautions are not necessary.

6.4 References to other sections: Personal protective equipment – section 8.

Waste disposal – section 13.

SECTION 7. STORAGE AND HANDLING**7.1 Precautions for safe handling:**

7.1.1 Particular recommendations: Prevent excessive (undesirable) dust formation during handling.

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c) Odour threshold	Not specified.
d) pH	10 - 11
e) Melting / solidification point	Not specified.
f) Initial boiling point and range	Not specified.
g) Ignition point	Non-flammable.
h) Evaporation speed	Not specified.
i) Flammability (solid subst., gas)	Non-flammable.
j) Upper/lower limit of flammability or explosiveness	Not specified.
k) Vapour pressure	Not specified.
l) Vapour density	Not specified
m) Relative density	2.10 - 2.20 g/cm ³ (bulk density)
n) Solubility	Non-soluble
o) Differentiation coefficient: n- octanol/water	Not specified.
p) Self-ignition temperature	Non-flammable.
q) Decomposition temperature	Not specified.
r) Dynamic viscosity	Not specified.
s) Explosive properties	None.
t) Oxidisation properties	None.

9.2. Other information

Solvent content (VOC) 0% (according to definition of the air protection act)

Note:

"Not specified": irrelevant for the product

"None": not available for the product.

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity:	No decomposition under appropriate storage and use conditions.
10.2 Chemical stability:	The product is stable under normal conditions.
10.3 Possible dangerous reactions:	Reaction with strong acids.
10.4 Conditions to be avoided:	None.
10.5 Incompatible materials:	Strong acids.
10.6 Dangerous decomposition products:	None.

SECTION 11. TOXICOLOGICAL INFORMATION**11.1 Information about toxicological effects:**

Ways of entry to organism: No acute or chronic effects when entering through common ways of entry.

Acute toxicity:

- LD₅₀, oral, rat (mg.kg⁻¹): not specified
- LD₅₀, dermal, rat or rabbit (mg.kg⁻¹): not specified
- LC₅₀, inhalation, rat, for aerosols or particles (mg.kg⁻¹): not specified
- LC₅₀, inhalation, rat, for gases and vapours (mg.kg⁻¹): not specified

Swallowing: Not specified.**Skin contact:**

Skin irritant: Not classified.

Eye contact

Eye irritant: Not classified.

Sensitisation of respiratory tract / skin:

Not classified.

Mutagenicity in embryonic cells:

Not classified.

Carcinogenicity:

Not classified.

Toxicity for reproduction:

Not classified.

Toxicity for specific target organs – single exposition :**Toxicity for specific target organs – multiple expositions:** STOT - repeated expositions: Not classified.**Dangers on inhalation:**

Not classified.

Other information:

The product may contain crystalline silica. Product dust inhalation is considered a

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source of minimum risk of lung fibrosis (silicosis). Chronic obstructive lung disorder is only suspected after very long exposition times (years) under exposure concentrations exceeding the permitted limits. Carcinogenicity of cristobalite for humans has not been unambiguously proved.

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity for aqueous organisms: A natural material by origin, no assumed toxic effects on aqueous organisms.

12.2 Persistence and degradability: The product is inert and does not degrade.

12.3 Bioaccumulation potential: Data not available.

12.4 Mobility in soil: Data not available.

12.5. Results of PBT and VPvB assessment: Not required.

12.6. Other unfavourable effects: The product is inert and other potential negative effects are connected with mechanical effects of dust formation.

SECTION 13. DISPOSAL INSTRUCTIONS

13.1 Methods of waste disposal: Dumping on specified dumps. Disposal by release to sewerage: Excluded by the product nature.

Waste classification according to Decree 381/2001 Coll. (Waste Catalogue):

10 12 01 Waste ceramic material before thermal processing, cat. O.

13.2 Methods of contaminated waste disposal: According to the nature of package construction material the waste is classified in group 15 01 Packaging materials (including separately collected communal waste packaging materials), cat. O. Empty package without content residues may be disposed of by procedures dictated by the construction material of the package (repurchase, recycling, dumping, incineration).

13.2 Appropriate methods of disposal of substance of mixture:

13.3 Waste legislation: Act no 185/2001 Coll., on Waste
Decree no 381/2001 Coll. (Waste Catalogue)
Decree no 383/2001 Coll. on waste Disposal Details

SECTION 14. TRANSPORT INFORMATION

14.1 UN no:

Not subject to regulations for dangerous object transport.

14.2 UN name for consignment:

Not subject to regulations for dangerous object transport.

14.3 Class/classes of dangers for transport:

Not subject to regulations for dangerous object transport.

14.4 Package group:

Not subject to regulations for dangerous object transport.

14.5 Environment hazards:

Not subject to regulations for dangerous object transport.

14.6 Special safety precautions for users:

Not subject to regulations for dangerous object transport.

14.7 Bulk transport according to Annex II MARPOL 73/78 and IBC regulation:

Not subject to regulations for dangerous object transport.

SECTION 15. REGULATORY INFORMATION

15.1 Regulations concerning safety, health and environment/specific legislation concerning substance or mixture

Act no 254/2001 Coll. on Waters (Water Act), as amended


Act no 185/2001 Coll., on Waste, as amended

Act no 201/2012 Coll., on Air Protection

Act no 258/2000 Coll., on Public Health Protection, as amended

Act no 350/2011 Coll. of 27 October 2011 on Chemical Substances and Mixtures and on amendment to certain other acts (Chemical Act)

Decree no 402/2011 Coll. on Assessment of Dangerous Properties of Chemical Substances and Mixtures and

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Packaging and Labelling of Dangerous Chemical Mixtures
 ČSN 75 3415 Water Protection against Oil Substances. Objects for Oil Substance Handling and Storage
 Government Regulation no 361/2007 Coll., as amended, stipulating conditions for occupational health, including PEL and NPK exposure limits (see 8 above).
 Regulation (EC) no 1907/2006 on Registration, Evaluation, Authorisation & Restriction of Chemicals and on Establishment of European Chemical Agency, as amended (REACH).
 Regulation (EC) no 1272/2008 of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC and on amendment of Regulation (EC) no 907/2006 (CLP)
 Directive 67/548/EEC (DSD) – Dangerous Substances Directive
 Directive 1999/45/EC (DPD) – Dangerous Preparations Directive

15.2 Chemical safety assessment
 There are no available data for assessment of safety of chemical substances for this material.

SECTION 16. OTHER INFORMATION

Data on amendments and revisions:

Rev. no	Date	Amendment description
1.	6 Nov 2007	Change of structure and form of the whole material safety data sheet according to Annex II to Regulation of the European Parliament and of the Council (EC) no 1907/2006 (REACH)
2	20 Nov 2012	Periodic revision
3.	20 Aug 2013	Overall reformulation of SPC in compliance with the effective Annex II to Regulation (EC) no 1907/2006

Important literature references and data sources: Data contained in this material safety data sheet were compiled from materials of the manufacturer and on the basis of effective CR and EU legislation.

In the case of mixture information about which information evaluation method according to Article 9 of Regulation (EC) no 1272/2008 was used for classification purposes:

Approximation according to hazards of components and physical nature of product.

List of relevant R-phrases, standard risk phrases, safety phrases and/or instructions for safe handling. Full wording of all phrases and instructions not included in sections 2 to 15:

Symbols of classification DSD/DPD:

Xi Irritant

Symbols of classification CLP:

Eye Irrit 2 Severe damage to the eyes / eye irritation, cat. 2

Skin Irrit. 2 Causticity / irritant to the skin, cat. 2

STOT SE 3 Toxicity for specific target organs – singular exposition cat. 3

R-phrases:

R36/37/38 Irritant to the eyes, the respiratory tract and the skin

H phrases:

H315 Irritant to the skin.

H319 Causes severe eye irritation.

H335 May cause respiratory tract irritation

Instructions concerning all training courses for staff responsible for human health and environment protection:

Staff should be informed about the principles of work with the product and required personal protective equipment in the context of regular OHS training.

Recommended limitations for use: Use exclusively for purposes specified by the manufacturer.

The following recommendations should be preserved when handling the product. For the sake of unification the recommendations are formulated in the form of S-phrases:

S22 – Do not inhale dust

S24/25 – Avoid contact with skin and eyes

S28 – Immediately wash exposed skin with plenty of warm water and soap

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S37/39 – Use appropriate protective gloves and goggles or face mask

Other information:

The above data describe exclusively safety requirements for products and are based on current knowledge. They do not describe product properties in the sense of quality parameters and legislative regulations for warranty compliance.

End of safety data sheet.