



SAFETY DATA SHEET

according to the Regulation (EC) No. 1907/2006 (REACH) of the European Parliament and the Council

Date of issue: 11 September 2003

Page: 1/6

Date of revision: 1 November 2008

Revision No.: 4

Product name: **Refractory mastics**

Product group: OPAMAT

quality: **RUDOMAL KV, RUDOMAL KVP**

1. IDENTIFICATION OF SUBSTANCE OR PREPARATION AND OF COMPANY OR UNDERTAKING

1.1 Identification of substance or preparation: Refractory mastics

CAS No.: is not a preparation

ES (EINECS) No.: -

Index No.: -

Other names of substance: -

1.2 Use of substance or preparation:

Building industry – gluing of chimney pipes and acid-proof fireclay materials

1.3. Identification of company or undertaking:

Manufacturer: P-D Refractories CZ a.s.

Nádražní 218, 679 63 Velké Opatovice

Tel.: 516 493 111, Fax: 516 477 338

Email address of qualified person responsible for Safety Data Sheet: kovar@mslz.cz

1.4 Emergency telephone No.:

Toxicological information center – 224919293, 224915402

Na Bojišti 1, 128 08 PRAGUE 2

2. IDENTIFICATION OF HAZARDS

2.1 Classification of substance or preparation: Xi – irritating

R-sentence: 37/38-41

Note: The full wording of R – sentences can be found under point 16

2.2. Hazards for humans:

It irritates the eyes and respiratory organs, there is a serious dangerous of injury to the eyes.

2.3. Environmental hazards:

Does not have any serious impact on environment.

2.4. Potential incorrect use of substance or preparation: Not mentioned.

2.5 Other hazards:

Not specified

3. COMPOSITION / INFORMATION ON INGREDIENTS

3.1. Description and characteristics:

Dry mixture on basis of syntetic grog and silicate sand with chemical bond and hardener on basis of alumina phosphate. The mortar contains 15 to 25 % of non-fibrous aluminum oxide (CAS: 1344-28-1, ES: 215-691-6) and 70-80 % of silicon dioxide – silica sand (CAS: 14808-60-7, ES: 238-878-4)

3.2. Substances representing hazards to health or environment:

Chemical name of the substance	CAS	ES(EINECS)	Classification	R-Sentences	Concentration (% of the mass)
Sodium silicate	1344-09-8	215-687-4	Xi	R 37/38-41	max. 11

Note: The full wording of R-sentences can be found under point 16

3.3. Substances with exposure limits for working environment:

None in the solid form, otherwise see data in chapter 8.1.

3.4. Persistent, bioaccumulative and toxic substances, highly persistent and highly bioaccumulative substances:

The product does not contain any PBT or PvB substances.

4. FIRST AID MEASURES

4.1 General information The formed dust can, in higher concentrations, irritate mucosa, conjunctiva and airways. Respect the working hygiene when manipulating with this material. Look for a medical aid in case of serious troubles. Immediate medical attention is not necessary.

4.2. Inhaling: **Symptoms:** Irritation of airways.

First aid: In case of inhaling dust, it is necessary to move to fresh air. Rinse oral cavity with water, blow your nose in order to remove the inhaled dust.



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4.3 Skin contact:

Symptoms: Can irritate

Remove the affected person from the source of contamination. Remove the contaminated clothes and shoes and clean them before further use. Wash the skin by warm water and soap or other detergent for skin treatment immediately. Use a suitable cream afterwards.

4.4. Eye contact:

Symptoms: Causes irritation of eyes.

First aid: Rinse with a stream of tepid water. After rinsing with water, standard eyewater may be applied. Wash skin around eyes with water. Immediate medical attention is not necessary.

4.5 Ingestion:

Symptoms: Upon ingestion of dust, temporary irritation of digestion tract may occur including nausea and vomiting. Look for a medical aid in case of any troubles.

First aid: Never induce vomiting if a person is unconscious! In the case of unconsciousness do not give any drinks! Rinse mouth thoroughly with water, drink several glasses of water. Immediate medical attention is not necessary.

4.6 Other information: None

5. FIRE-FIGHTING MEASURES

5.1. Suitable extinguishing media:

Incombustible. The packaging material used may be combustible. Use appropriate extinguishing media dependent on surrounding fire.

5.2. Unsuitable extinguishing media:

None

5.3 Special danger:

None

5.4 Special fire-fighting protective aids:

Depends on surrounding fire.

5.5 Other information:

Incombustible material.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions: Prevent further spreading of dust by air. In the case of dusty environment use personal protective aids (see chapter 8). Other special measures are not necessary.

6.2 Environmental precautions: Does not have any immediate negative impact on environment. Prevent further spreading of dust by air. Place a devaluated product in special waste collection bins.

6.3 Cleaning methods: Sweep away strewn product and place in special waste collection bins. Prevent excess spreading of dust while cleaning. Other special measures are not necessary.

6.4 Other information: See chapters 8 and 13.

7. HANDLING AND STORAGE

7.1 Handling: Prevent excess (undesirable) spreading of dust while handling. Use personal protective aids where necessary. Other special measures are not necessary.

7.2 Storage: 7.2.1 Conditions of safe storage: Store dry. Prevent spreading of dust.

7.2.2 Storage limits: Are not prescribed.

7.3. Specific use: No other requirements and measures apart from those mentioned in chapter 1.2.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

8.1 Exposure limit values: Are governed by government regulation No. 178/2001 Coll., which determines health protection at work, Annex No. 3: Permissible exposure limits for dust:

No hygienic limits are prescribed for the preparation concerned. With respect to the nature of the preparation the following values may be applied:

For dust with mainly fibrogenous effect:

substance

PEL_r (mg.m⁻³)

PEL_c (mg.m⁻³)



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	(respirable fraction)		(total fraction)
Silica, cristobalite substance	0.1 PEL _r (mg.m ⁻³)		-- PEL _c (mg.m ⁻³)
	F _r ≤ 5%	F _r > 5%	
other silicates (F _r = respirable fraction) For dust with possible fibrogenous effect: substance	2.0	10 : F _r	10
			PEL _c (mg.m ⁻³) (total fraction)
Amorphous SiO ₂ 4.0 For dust with mainly non-specified fibrogenous effect: substance			PEL (mg.m ⁻³)
Aluminum and its oxides (except of gamma Al ₂ O ₃)			10

8.2 Exposure limitation:

8.2.1 Staff exposure limitation: Ventilation – where it is possible to maintain the content of dust in the air within limits by technology methods (local exhaust, ventilation etc.)

Personal protective aids:

Respiratory protection: When the highest permissible concentration is exceeded, use a respirator with filter against fibrogenous dust.

Hand protection: Protective gloves (e.g. leather).

Eye protection: In places with excess dust use protective glasses with side cover.

Skin protection: Working clothes and boots.

Other information:

Prevent contact with eyes, do not inhale.

Do not stay in places with high concentration of dust if not necessary.

Maintain standard personal hygiene before eating, drinking and using toilet and after termination of work.

8.2.2 Environmental exposure limitation:

Prevent spreading of dust during cutting, grinding, splitting etc.

9. PHYSICAL AND CHEMICAL PROPERTIES

The information relates to the preparation.

9.1 General information: State at 20 °C: solid – loose mixture with grain size below 1 mm

Color: varied

Smell: none

9.2 Important information for the protection of health, safety and environment:

pH value: 11
 Boiling point (°C): does not apply
 Combustion point (°C): is not combustible
 Combustibility (°C): is not combustible
 Explosive properties: none
 Oxidation properties: none
 Vapor pressure: does not apply
 Relative density at 20 °C: 2,7 g/cm³ (bulk density)
 Solubility: insoluble
 Solubility in water at 20 °C: insoluble
 Partition coefficient n-octanol/water: does not apply
 Viscosity: does not apply
 Vapor density: does not apply
 Evaporation speed: does not apply

9.3. Other information:

Thaw point (°C): does not apply



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10. STABILITY AND REACTIVITY

The product is stable under normal conditions.

10.1 Conditions to avoid: None

10.2 Materials to avoid: Strong acids

10.3 Dangerous decomposition products: None

11. TOXICOLOGICAL INFORMATION

Entrance paths to organism: The product has no acute or chronic effects in case of standard entrance paths to organism.

11.1 Acute toxicity:

- LD₅₀, orally, brown rat (mg.kg⁻¹): not determined
- LD₅₀, dermally, brown rat or rabbit (mg.kg⁻¹): not determined
- LC₅₀, by inhaling, brown rat, for aerosols or particles (mg.kg⁻¹): not determined
- LC₅₀, by inhaling, brown rat, for gases and vapors (mg.kg⁻¹): not determined

11.2 Subchronic – chronic toxicity: Does not apply.

11.3 Other effects: Sensitization: None

Carcinogenicity: None

Mutagenity: None

Toxicity for reproduction: None

Experience with humans: Not stated.

Tests on animals: No data available.

Other information: The product may contain crystalline silica. Inhaling dust from the product is considered a source of minimum risk of occurrence of pulmonary fibrosis (silicosis). However, suspicion of chronic obstructive pulmonary disorders occurs after a very long time of exposure (years) to concentrations exceeding permissible limits. Carcinogenicity of cristobalite has not been unambiguously proved in humans.

12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity: This is a material of natural origin and toxic effect upon water organisms is not assumed.

12.2 Mobility: No data available.

12.3 Persistence and decomposability: The product is inert and does not decompose.

12.4 Bioaccumulative potential: No data available.

12.5. PBT assessment results: Not required.

12.6. Other adverse effects: The product is inert and its possible negative effects consist in mechanic consequences of dusting.

13. DISPOSAL CONSIDERATIONS

13.1 Disposal of substance or preparation: Classification of waste according to Decree 381/2001 Coll. (Waste Catalogue):

10 12 08 Waste ceramic articles, bricks, roof tiles and building material (after heat treatment), category O.

Disposal of empty package: According to the nature of the structural material of the package, the waste is included in group 15 01 Waste (including separately collected municipal packaging waste), O category. An empty package free of remainder of content can be disposed of by processes depending on the structural material of the package (collection for repeated use, recycling, dumping, burning).

13.2 Suitable methods of disposal of substance or preparation: Dumping on waste dumps of the relevant group.

13.3 Statutory regulations concerning waste: Act No. 185/2001 Coll., on Waste

Decree No. 381/2001 Coll. (Waste Catalogue)

Decree No. 383/2001 Coll. on details of waste disposal

14. TRANSPORT INFORMATION

Land transport: ADR/RID: Not subject to regulations.

Inland water transport: Not subject to regulations.



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Sea transport: Not subject to regulations.

Air transport: Not used.

15. REGULATORY INFORMATION

Chemical safety assessment for substances contained in the preparation was not carried out.

15.1 Information concerning the protection of health, safety and environment that must be stated on the substance or preparation package:

Package marking:

Warning symbol:

Xi



Irritating

It contains the dangerous substance: Sodium silicate (ES: 215-687-4)

R-phrases: R 37/38 It irritates the respiratory organs and skin.

R 41 Danger of serious visual impediment

S-phrases: S 22 Do not inhale the dust.

S 26 In case of eye contact rinse with water immediately and seek medical aid.

S 36/37/39 Use protective suit, protective gloves, protective goggles or a face shield.

15.2 Specific measures at the European Community level

The Safety Data Sheet complies with the European Union requirements:

Regulation of the European Parliament and of the Council (ES) No. 1907/2006 (REACH)

15.3 Specific measures on the protection of personnel and environment: Not specified.

16. OTHER INFORMATION

List of respective R-phrases mentioned in points 2, 3 and 15 of the Safety Data Sheet:

R 37 / 38 It irritates the respiratory organs and skin.

R 41 Danger of serious visual impediment

Training advice: Instructions on the product application shall be included in the safety training system (entry training, staff training, refresher training) in compliance with specific conditions at the workplace.

Recommended restrictions on use: Use only for purposes stipulated by the producer.

Other information: The above mentioned information entirely describes safety requirements on products and is based on current knowledge. It does not describe quality parameters of the product within legal regulations for warranty fulfilment.

Sources of key data: The data included in this sheet have been prepared in compliance with the producer's documents and on the basis of valid legal regulations of the Czech Republic.

Alterations and revisions:

Revision No.	Date	Modifications carried out
1.	18 Feb. 2005	This safety data sheet replaces safety data sheet from 11.9.2003. the main changes: Point 2 – information about the substance or preparation composition: Use of alumina phosphate as hardener which is not classified as hazardous instead of sodium fluorosilicate. - The adjustment of the content and design of the data sheet in compliance with a new regulation.
2.	1 Feb.2006	This safety data sheet replaces safety data sheet from 18.2.2005. the main changes: graphic adjustment of the data sheet
3.	6 Nov. 2007	Adjustment and formal changes of the data sheet generally according to supplement no.II to Regulation (EC) No. 1907/2006 (REACH) of the European Parliament and the Council



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4.

1 Nov. 2008

Supplement of validity to the new product RUDOMAL KVP