Mineral dry spray mortar (SPCC), coating thickness 6-50 mm

(after 28 days) Compressional EN 12190 55 - 75 N/mm² strength (after 28 days) Flexural strength (after 28 days)	Characteristics				
Areas Of Use Uses For exterior and interior use For concrete and reinforced concrete The product is a component of the LaMaCo System corresponding to the DAfStb Guidelines for repair mortars and concrete 2001-10: Class M2 / SPCC and Class M3 / SPCC. Technical Data Product group Spray mortar. Synthetically modified, hydraulically hardening, single component factory dry mortar on cement base with 2 mm maximum grain size Composition Data Criterion Density Density Of fresh mortar Maximum grain size Tear-off strength (after 28 days) Compressional strength (after 28 days) Flexural strength (after 28 days) Static E-modulus (after 28 days) (1 g/cm³ = kg/dm³ = kg/l	Function	 Non-combustible (class A1) in accordance with the European fire protection building standard DIN EN 13501-1 Appropriate to recreate a fire resistance of structural components which become a repair Tested in accordance with the DIN-unit temperature-time curve and the hydrocarbon curve for a fire duration of 90 mins. Applied by machine with the dry spray method 			
For exterior and interior use For concrete and reinforced concrete The product is a component of the LaMaCo System corresponding to the DAfStb Guidelines for repair mortars and concrete 2001-10: Class M2 / SPCC and Class M3 / SPCC. Technical Data Product group Spray mortar. Synthetically modified, hydraulically hardening, single component factory dry mortar on cement base with 2 mm maximum grain size Composition Data Criterion Norm / Test prescript Value Units Density of fresh mortar Maximum grain size Tear-off strength (after 28 days) Compressional strength (after 28 days) Flexural strength (after 28 days) Static E-modulus (after 28 days) (1 g/cm³ = kg/dm³ = kg/l	A Of II		omix and LaMaCo Truck (not in	every country	у
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Synthetically modified, hydraulically hardening, single component factory dry mortar on cement base with 2 mm maximum grain size	Technical Data				
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of fresh mortar 2.0 Mm Maximum grain size 2.0 Mm Tear-off strength (after 28 days) EN 1542 > 2,0 N/mm² Compressional strength (after 28 days) EN 12190 55 - 75 N/mm² Flexural strength (after 28 days) TP BE PCC 9 - 12 N/mm² Static E-modulus (after 28 days) EN 13412 24000 N/mm² (1 g/cm³ = kg/dm³ = kg/l	Data				
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(after 28 days) EN 12190 55 - 75 N/mm² strength (after 28 days) TP BE PCC 9 - 12 N/mm² (after 28 days) Static EN 13412 24000 N/mm² E-modulus (after 28 days) (after 28 days) (after 28 days)		Maximum grain		2.0	
strength (after 28 days) Flexural strength TP BE PCC 9 - 12 N/mm² (after 28 days) EN 13412 24000 N/mm² E-modulus (after 28 days) (after 28 days) (1 g/cm³ = kg/dm³ = kg/l			EN 1542	> 2,0	N/mm ²⁽²
Flexural strength (after 28 days)		strength	EN 12190	55 - 75	N/mm² ⁽²
E-modulus (after 28 days) (1 g/cm³ = kg/dm³ = kg/l		Flexural strength	TP BE PCC	9 - 12	N/mm²
		E-modulus (after 28 days)		24000	N/mm ²⁽²
			$n^3 = kg/l$		
The values stated are average values. Due to the use of natural raw materials in our products, the actual value determined on an individual delivery may deviate slightly, without compromising product suitability. Certificates / Norms / Approvals The values stated are average values. Due to the use of natural raw materials in our products, the actual value determined on an individual delivery may deviate slightly, without compromising product suitability. Report SPCC Concrete Repair System Cem Crete DSM 100 P-56.3-9904 General approval for use as a construction material		materials in our products, the actual value determined on an individual delivery may deviate slightly, without compromising product suitability. Report SPCC Concrete Repair System Cem Crete DSM 100			
Report SPCC Concrete Repair System Cem Crete DSM 100 P-56.3-9904 General approval for use as a construction material					

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Application		
Substrate	 Requirements on the substrate: The concrete substrate must be load bearing and free of homogeneous or foreign substances with a separating effect as well as free of corrosion promoting components (e.g. chlorides). Less firm layers and mud accumulation are to be removed. Damp in accordance with the definition of the DAfStb Renovation Guidelines 2001-10. The degree of cleanliness of the exposed reinforcement steel after substrate preparation: Sa 2 ½ - clean metal in accordance with DIN EN ISO 12 944-4 (replacement for DIN 55 928 Part 4) or DIN EN ISO 8501-1. Adhesive strength: on average 1.5 N/mm² Adhesive strength lowest individual value: 1.0 N/mm² 	
	Critical substrates must be tested for suitability (create test surface).	
Substrate preparation	The substrate is to be prepared with suitable mechanical measures such as e.g. blasting with solid blasting agents, or high pressure water blasting (> 800 bars). Pores and blowholes must be opened sufficiently. The edges of damaged areas should be angled off below approx. 45°.	

Application temperature	Minimum application and substrate temperature + 5 °C		
	Maximum a	pplication temperature + 30 °C	
Coating procedure	Substrate preparation Corrosion protection with Epo Bond SMI at exposed reinforcement bars. Please note: Epo Bond SMI in 3 application steps Concrete replacement with Cem Crete DSM 100 Layer thickness 6-50 mm Thicker coatings must be applied with several coats.		
Material preparation	With approv	ved dry spray machine	
Mixing procedure	The mixing process takes place in the spray nozzle		
Consumption	Article	Type of application	Consumption approx.
	00793	Material per cm damage depth / coating thickness (without rebound)	20.0 kg/m²
	Precise consumption figures should be determined on the object.		ned on the object.

Application	1.	Substrate preparation
		The substrate is to be prepared with suitable mechanical measures. De-rust the exposed reinforcement steel in accordance with DIN EN ISO 12 944-4 to standard grade of cleanliness Sa 2 ½ respectively Sa 2. The de-rusted reinforcement steel must be free of dust and grease. Standard grade of cleanliness of exposed reinforcement after substrate preparation depends on planned principle of repair: Sa 2 acc. DIN EN ISO 8501-1 at repair principle R (re-alkalinisation with mortar) Sa 2 ½acc. DIN EN ISO 8501-1 at repair principle C (reinforcement coating)
	2.	Corrosion protection Immediately after de-rusting the exposed reinforcement steel in accordance with DIN EN ISO 8501-1, the coating with Epo Bond SMI takes place in three applications: 1 st coat, 2 nd coat and 3 rd coat

Application (cont.)

Coat the reinforcement steals with a fine paint brush evenly and without gaps.

Waiting time between each application approx. 4,5 hours. The corrosion protection on the reinforcement steel must be cured as far as a peeling at subsequent coatings is excluded.

Reinforcement steel Ø up to 18 mm:

1st application: Epo Bond SMI

Consumption approx. 130 g/m per single application

2nd application: **Epo Bond SMI**

Consumption approx. 140 g/m per single application

3rd application: **Epo Bond SMI**

Consumption approx. 130 g/m per single application

or

Reinforcement steel Ø over 18 mm:

1st application: **Epo Bond SMI**

Consumption approx. 150 g/m per single application

2nd application: **Epo Bond SMI**

Consumption approx. 160 g/m per single application

3rd application: **Epo Bond SMI**

Consumption approx. 150 g/m per single application

The concrete substrate must be sufficiently prewetted before

application of **Cem Crete DSM 100** (for the first time approx. 24 hours before spray application). At the moment of spray application however it must be dry or may appear a matt damp surface.

3. Reprofiling with LaMaCo Technology:

General

Transfer of the dry mortar to dry spray machine via transfer hood.

Transfer hoods available for:

- Mader Dry Spray Machine WM 05,
- Mader Dry Spray Machine WM 14,
- Aliva
- MBT Piccola 020 E

Control of material flow and material quantity between silo and dry spray device using filling status probe.

When using pre-wetting:

Mixing well for pre-wetting **Cem Crete DSM 100** and through-flow meter for control of water quantity.

Spray procedure

The transport of the dry mortar takes place with a dry spray machine with rotor or transport chamber and pocket wheel.

For spraying, water is added at the spray nozzle. As compressor, a machine with min. 7 m³/min. air output at 3 bars is required.

Spraying should be carried out using a tested nozzle guide, which through nozzle distance, spray orientation, mortar and water quantity significantly influences the quality / rebound of the sprayed mortar.

Typical nozzle distance: 0,5 - 1,0 m.

Application (cont.)

4. Surface treatment

With surface works on the SPCC, two sprayings are necessary, in order to avoid bond disruptions with the substrate. When spraying the 2nd coat, the surface of the 1st coat must still be matt-damp.

Adhesive bond disrupting soiling such as e.g. dust is to be removed through suitable measures (e.g. with oil-free compressed air).

In particular for the spray works in interiors and in case of risk of soiling of the remaining concrete surfaces in outside areas, which are later to be given a technical spray coating, these surfaces must be covered e.g. with sheeting fixed on tracks.

It must be ensured that adhesive bond disrupting soiling through rebound or spray mist does not adhere to surfaces to be coated and that any such soiling is removed through suitable measures such as e.g. sand blasting.

The surface of the 2nd coat must be drawn off over tracks. Care should be taken that joint disruptions and separations from the substrate are avoided.

If tracks are anchored in the application surfaces to keep coating thickness, these should be removed after conclusion of the spray works. Remaining parts must end a minimum of 5 cm under the spray concrete surface. The holes and reveals produced should if possible be sealed fresh in fresh with the same spray concrete.

Any working joints that occur should be treated in accordance with DIN 1045, para. 10.2.3 (edition July 1988) as necessary with sand blasting, oil free compressed air blasting off of soiling, and prewetting, so that a homogenous mortar layer is produced after conclusion of the spray application.

In general, if not required otherwise, the surface should be left with a rough spray finish (see DIN 18 551). Rebound should be disposed of!

After a specified hardening time (dependent on temperature, air humidity, application thickness and substrate), the surface can be drawn off over tracks. Joint disruptions and separations from the substrate must be avoided.

Spray down any defect areas. Do not use rebound material for reprofiling works.

If a felted surface is required, **Cem Crete DSM 100** can be over coated with **Cem Crete WSM 200** either manually or in the wet spray method.

Clean surface with high pressure cleaner (to remove fine spray dust).

	T = 5
Application (cont.)	5. <u>Post-application treatment</u>
	PCC mortars are to be treated after application so that no mixing
	water, which is necessary for the binding process, can escape.
	Post-application treatment methods:
	1. Cover with sheeting or mats
	2. Increase air humidity in the air layer above the surface
	3. Chemical post-application treatment
	The contract of the Contract o
	The post-application treatment must continue until the mortar has
	reached 50 % of its final solidity, under normal conditions according
	to ZTV-ING minimum 3 days.
	In the next application treatment period, no colour shapes from
	In the post-application treatment period, no colour change from
	dark to light may take place.
	Water for next application treatment may only be carrayed on the
	Water for post-application treatment may only be sprayed on the mortar surface once this is rainproof, corresponding to the
	weathering conditions after 6 - 24 hours.
	weathering conditions after 6 - 24 flours.
	An alternate drying and wetting of the mortar during the post-
	application period can lead to destruction of the mortar matrix and
	so to cracks and bubbles.
	30 to cracks and bubbles.
	A chemical post-application treatment may only be carried out when
	the subsequent works will be compatible with this.
	The corresponding data sheets should be observed accordingly:
	1. "Guidelines for the post-application treatment of concrete"
	of the DAfStb (February 1984)
	2. Data Sheet B8 of the Construction Advisory Council for Cement
	"Post-application treatment of concrete" (November 2002)
	Note:
	An essential part of the post-application treatment procedure is a
	sufficient pre-wetting of the concrete substrate before the
	application of the mortar, so that the substrate is saturated with
	water and the fresh mortar does not draw out any mixing water.
	The substrate must, as described in Substrate Preparation above,
	be "damp" according to the Renovation Guidelines.
	as samp soon ang or me mananan amananan
Machines	Recommended machines:
Wacinies	•Mader dry spray machine WM 05
	•Mader dry spray machine WM 14
	Sales and rental for Germany:
	Werner Mader GmbH
	Mortar and Concrete Spray Machines
	Bullauer Strasse 6
	D-64711 Erbach
	Phone +4960629442-0
	Fax +4960629442-29
	E-mail: <u>info@wernermader.de</u>
	Internet: <u>www.wernermader.de</u>
	Observe manufacturer's operating instructions!
Cleaning Of Tools	Clean spray pozzle immediately after use with water. Pound material
Cleaning Of Tools	Clean spray nozzle immediately after use with water. Bound material
Supply	can only be removed mechanically.
Product code and name	00793 CemCrete DSM 100
Packaging	00793 Cernicrete DSW 100 00793-001 25 kg sack
	large containers (not available in all countries)
	ia. go contantoro (not avanabio in an countrico)

Storage

Storage conditions Storage life Store in dry conditions

In unopened original sacks, product can be stored for 9 months; in large containers also for 9 months. (Relevant data: refer to packaging).

This product is low in chromates according to TRGS 613. We guarantee these characteristics until expiry of the max. storage life.

Environment

Disposal

Waste has to disposed considering the local, official regulations.

Waste key in accordance with the European Waste Catalogue: 17 09 03.

Special notes

Marking

Safety

Xi – irritant

This product requires marking according to the current EU guidelines. For further information on handling, storage and disposal of the product, refer to the EU Material Safety Data Sheet, available for the professional user. You will receive an EU Material Safety Data Sheet with your first order. Please observe the information on handling, storage and disposal of the product.

GISBAU-code CE-Marking

Revision No. Validity ZP01

CE Marking acc. EN 1504-3 Cem Crete DSM 100

EC Declaration of conformity acc. EN 1504-3 Cem Crete DSM 100

Cem Crete DSM 100/INT/EN/027

10.09.2009

Previous product information is no longer valid. Please ensure before use that this is the latest version of the document.

The information and data serve to ensure the normal application purpose and normal application suitability.

Uses not specifically discussed in this Technical Data Sheet may only take place after consultation with LaMaCo Malaysia



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05150 Alor Setar, Kedah. Malaysia

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Health & Safety

Some of the components of this product may be hazardous during mixing and application. Please consult the relevant Health & Safety Data Sheets, available from **LaMaCo Malaysia** on request and sent with each delivery.