MAPEI

Elastocolor Rasante SF

High thickness fibre-reinforced elastomeric coating

IN COMPLIANCE WITH EUROPEAN STANDARD EN 1504-2 (C) PRINCIPLES PI-MC-IR MAPEI SURFACE PROTECTION SYSTEMS FOR CONCRETE

CE EN 1504-2

GOOD ELASTICITY

HIGH FILLING PROPERTIES

WHERE TO USE
Ready-to-use, intermediate smoothing and filling compound, particularly suitable for application by trowel for embedding reinforcement mesh (**Elastocolor Net**) and to improve the homogeneity of the substrate and provide flexibility for the **Elastocolor** finish.

Some application examples
- Intermediate elastomeric high-filling and smoothing compound with a rustic finish, to even out irregularities in the substrate before coating with **Elastocolor Paint**.
- Intermediate plasto-elastic coat ideal for embedding **Elastocolor Net** reinforcing mesh.
- Intermediate elastomeric coat to increase the total thickness and overall flexibility of the **Elastocolor** system.
- **Elastocolor Rasante SF**, applied with a brush, honeycomb-pattern sponge roller or short-haired roller or by spray, diluted with 5-10% of water, may also be used as a flexible filling and finishing coat similar to quartz paint.

TECHNICAL CHARACTERISTICS
Elastocolor Rasante SF is a cement-free, elastomeric acrylic emulsion-based fibrous, intermediate material admixed with graded sand, blended to a formula developed in MAPEI's own Research and Development Laboratories. If the substrate has widespread cracking less than 1 mm thick, reinforce **Elastocolor Rasante SF** with **Elastocolor Net** mesh which, after drying, forms a permanent, flexible reinforcement which mimics the expansion of the substrate.

Elastocolor Rasante SF meets the main requirements of EN 1504-9 ("*Products and systems for protecting and repairing concrete structures: definitions, requirements, quality control and conformity assessment. General principles for the use and application of systems*"), and the requirements of EN 1504-2 ("*Protection systems for concrete surfaces*") for class: products for protecting

Elastocolor Rasante SF

TECHNICAL DATA (typical values)

Conforms to the following standards:

– products certified according to EN 1504-2 (Surface protection systems for concrete), 2+ and 3 compliance certification system;
– classes according to EN 1504-2: products for protecting surfaces - coating - protection against the risk of penetration (1.3) (ZA.1d) + control of humidity (2.2) and increase in resistivity (8.2) (ZA.1e) (C, PI-MC-IR principles)

PRODUCT IDENTITY	
Consistency:	thick liquid
Colour:	white, from the MAPEI colour chart range or in various colours obtained using the **ColorMap®** automatic colouring system
Density (EN ISO 2811-1) (g/m³):	approx. 1.47
Dry solids content (EN ISO 3251) (%):	approx. 77
Brookfield Viscosity (mPa·s):	approx. 177,500 (rotor 6 - 5 rpm)
APPLICATION DATA	
Dilution rate:	by trowel: ready-to use; by brush, by roll or by spray: +5-10% of water
Waiting time between each coat:	at least 24 hours under normal humidity and temperature conditions, and in all cases, when the previous layer is completely dry
Application temperature range:	from +5°C to +35°C
Consumption (kg/m²):	– by trowel: 0.7-0.8 (per coat) – by brush or roller: approx. 0.5 (per coat) – by spray: 0.8-1.0 (per coat)
FINAL PERFORMANCE	
VOC content of ready-mixed product (white) (European Directive 2004/42/EC) (g/l):	≤ 15
VOC content of ready-mixed product (coloured) (European Directive 2004/42/EC) (g/l):	≤ 28

surfaces - coating (C) - protection against the risk of penetration (1.3) (protection against ingress, PI) (ZA.1d) + control of humidity (2.2) (moisture control, MC) and increase in resistivity (8.2) (increasing resistivity, IR) (ZA.1e).

RECOMMENDATIONS

- Do not use **Elastocolor Rasante SF** to waterproof horizontal surfaces, such as terraces (use **Aquaflex System** or **Mapelastic**).
- **Elastocolor Rasante SF** is not suitable to waterproof surfaces which are permanently immersed in water, such as water tanks, purification tanks or canals.
- Protect **Elastocolor Rasante SF** from rain or wind.
- Use only flexible paint for coating over **Elastocolor Rasante SF**.
- Do not apply **Elastocolor Rasante SF** on damp substrates, or on substrates which are not fully cured.
- Do not apply **Elastocolor Rasante SF** if the humidity level is higher than 85% (in any case on dry substrates and not with direct sunlight). Apply the product with a temperature between +5°C and +35°C.
- **Elastocolor Rasante SF** may be diluted with water (not solvents).
- **Elastocolor Rasante SF** is not suitable for use as a wearing surface.
- Do not apply **Elastocolor Rasante SF** on cracks wider than 1 mm.
- Do not apply **Elastocolor Rasante SF** on de-humidifying render, lime-rich render or particularly, crumbly render.
- Do not pre-treat substrates with **Elastocolor Primer** or **Malech** if the surface has old paintwork or if it is not absorbent.
- Please refer to the “Safety instructions for preparation and application” section.

APPLICATION PROCEDURE

Preparation of the substrate

Surfaces to be treated with **Elastocolor Rasante SF** must be perfectly clean, sound and treated beforehand with **Malech**.
On crumbling substrates or substrates with low absorbency, use **Elastocolor Primer** for the preliminary treatment cycle instead.
Before priming, level the substrate and repair damaged areas of the concrete with special shrinkage-controlled mortars from the **Mapegrout** or **Planitop** range.
Remove all traces of dirt, oil, grease, saline efflorescence, moss algae, which prevent **Elastocolor Rasante SF** from bonding to the substrate.
The choice of cleaning system for old surfaces depends on the type of contamination to be removed, but washing with cold water is usually sufficient.
Cleaning with hot water or steam is particularly suitable if oil or grease needs to be removed.
If deemed necessary, sand-blasting may also be

carried out. If the surface is not dirty, a thorough brushing with a stiff brush is sufficient.
Deep cracks wider than 1 mm must first be opened up with a grinder, cleaned and then treated with **Elastocolor Primer** and sealed with a sealant which may be painted over (such as **Mapeflex AC4**).

Preparation of the product
The product is ready-to-use for application with a metal trowel.
If an "orange peel" finish is required, **Elastocolor Rasante SF** may be applied with a honeycomb roller, and the product may be diluted with 5-10% of water according to the finish required.
For applications by brush or spray, diluite **Elastocolor Rasante SF** with 5% of water.
When diluting the product make sure it is thoroughly blended. Use a drill at low speed for mixing if necessary. When preparing only partial quantities, we recommend mixing **Elastocolor Rasante SF** as is in its original container before taking out the quantity required.

Application of the product
Elastocolor Rasante SF can be applied by metal trowel or brush, roller or air-spraying (not airless), on dried primer.
If more than one coat of **Elastocolor Rasante SF** is required, wait at least 24 hours between each coat, and in all cases, only when the previous coat is completely dry.
When the products is applied by embedding the reinforcing mesh, the most suitable mesh is made from fibreglass and weighs approximately 50-60 grams, with a mesh pitch which is approximately 2.7x2.7 mm (refer to MAPEI **Elastocolor Net** data sheet). Apply a first coat of **Elastocolor Rasante SF** on the surface to be treated with a 2-3 mm notched trowel, lay on the mesh and then pass over with a metal float to smooth out the product. After 24 hours, apply a second coat of **Elastocolor Rasante SF**.
If the substrate is smooth and regular, a consumption of approximately 0.7-0.8 kg/m^2 per coat of **Elastocolor Rasante SF** is sufficient to cover the mesh uniformly in two coats. After the above operation, the surface will have a smooth, regular rustic-effect finish and may be left as a finished surface. If not, the surface may be painted over with the same product (for an "orange peel" or smooth finish) or with **Elastocolor Paint**.
According to the type of application carried out and the level of finish required, **Elastocolor Rasante SF** may be applied with a trowel in one or two coats without inserting the mesh. As a general rule, only one coat is applied if it is used as an undercoat to even out the substrate, and in two coats if it is finished off with **Elastocolor Paint**. Two coats of **Elastocolor Rasante SF** are recommended, however, if it is used both as an undercoat and as a finishing material.

The product is extremely versatile. Various finishes can be achieved depending on the application system, tools used and diluition ratio (max 10% water). The product may be applied with a short, medium or long-haired roller, a fine-mesh honeycomb roller or a medium or large brush. When applied with a trowel **Elastocolor Rasante SF** will dry to an orange peel finish, which may be further enhanced according to the type of roller used (honeycomb pattern or long-haired). The effect is reduced by increasing the dilution percentage of 5-10% and by changing the tool used to apply the product.
It is not possible to obtain a permanent smooth finish by applying the product with a roller and with 10% dilution. Higher dilution rates could preclude the flexible protection of the surface and/or the covering of the substrate.

The best finish is obtained by applying a first coat of **Elastocolor Rasante SF** with a metal trowel as a smoothing undercoat, followed by a successive finishing coat.
Brush applications are best carried out by applying two coats diluted by 5-10%. The finish will be a fine-grained rustic type, similar to quartz paint.
Finally, **Elastocolor Rasante SF** can be applied by air-spraying (not airless).
Examples of the final effect and finishes obtained using **Elastocolor Rasante SF** are illustrated in the "MAPEI colours in Design" catalogue.

Cleaning
Trowels, brushes, rollers and equipment for application by spray may be cleaned with water before the **Elastocolor Rasante SF** has dried.

CONSUMPTION
– Trowel: 0.7-0.8 kg/m^2 per coat.
– Brush or roller: approx. 0.5 kg/m^2 per coat.
– Spray: 0.8-1.0 kg/m^2 per coat.
The above consumption rates are purely for indication purposes, and largely depend on the roughness of the substrate and the type of application technique used.

PACKAGING
Elastocolor Rasante SF is supplied in 20 kg plastic drums.

STORAGE
24 months in its original packaging in a dry place and at a temperature of between +5°C and +30°C. Protect from frost.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION
Elastocolor Rasante SF is not considered dangerous according to the European regulation regarding the classification of mixtures. It is recommended to wear gloves and goggles and to take the usual precautions taken for the handling of chemicals.
For further and complete information about the safe use of our product please refer to the latest version of our Material Safety Data Sheet.

PRODUCT FOR PROFESSIONAL USE.

WARNING
Although the technical details and recommendations contained in this product data sheet correspond to the best of our knowledge and experience, all the above information must, in every case, be taken as merely indicative and subject to confirmation after long-term practical application; for this reason, anyone who intends to use the product must ensure beforehand that it is suitable for the envisaged application. In every case, the user alone is fully responsible for any consequences deriving from the use of the product.

Please refer to the current version of the Technical Data Sheet, available from our website www.mapei.com

GREEN INNOVATION

Our Commitment To The Environment
MAPEI products assist Project Designers and Contractors create innovative LEED (The Leadership in Energy and Environmental Design) certified projects, in compliance with the U.S. Green Building Council.

All relevant references for the product are available upon request and from www.mapei.com

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PERFORMANCE CHARACTERISTICS FOR CE CERTIFICATION ACCORDING TO EN 1504-2, 2+ AND 3 COMPLIANCE CERTIFICATION SYSTEM CLASSES ZA.1d + ZA.1e (C, PI - MC - IR principles)

STANDARD	TEST	RESULTS AND CONFORMITY TO REQUIREMENTS	
EN ISO 1770	coefficiente of thermal expansion	result/class:	in conformity (coeff ≤ 0.0000 3 k^{-1})
EN ISO 2409	oblique cut	result/class:	GT1, in conformity (≤ GT2)
EN 1062-6	permeability to CO_2	μ:	130,569
		s_D (m):	78
		dry thickness according to s_D (m):	0.00060
		result/class:	in conformity (s_D > 50 m)
EN ISO 7783	permeability to water vapour	μ:	1242
		s_D (m):	0.7
		dry thickness according to s_D (m):	0.00060
		result/class:	I (s_D < 5 m)
EN 1062-3	capillary absorption and permeability to water	w [kg/($m^2h^{0.5}$)]:	0.04
		result/class:	in conformity (w < 0.1)
EN 1062-11 4.1	thermal compatibility: ageing: 7 days at +70°C	result/class:	in conformity (adherence ≥ 0.8 N/mm^2)
EN 13687-1	thermal compatibility: freeze-thaw cycles with immersion in de-icing salts	result/class:	in conformity (adherence ≥ 0.8 N/mm^2)
EN 13687-2	thermal compatibility: thunder-shower	result/class:	in conformity (adherence ≥ 0.8 N/mm^2)
EN 13687-3	thermal compatibility: thermal cycles without immersion in de-icing salts	result/class:	in conformity (adherence ≥ 0.8 N/mm^2)
static EN 1062-7	crack resistance	crack-bridging ability (μm):	1000
		result/class:	A3 (> 0.5 mm)
dynamic EN 1062-7	crack resistance	result/class:	B2
EN 1542	direct traction adherence test	result/class:	in conformity (adherence ≥ 0.8 N/mm^2)
EN 13501-1	reaction to fire	euroclass:	B s1 d0
EN 13036-4	resistance to skid marks	result/class:	I (wet internal surface) (> 40 wet units)
EN 1062-11:2002 4.2	artificial exposure to atmospheric agents	result/class:	in conformity
EN 1081	anti-static behaviour	result/class:	II (electrical resistance > 10^6 and < $10^8\Omega$)
	hazardous substances	result/class:	in conformity

FURTHER PERFORMANCE CHARACTERISTICS ACCORDING TO EN 1504-2 REGARDING REQUIREMENTS FOR CLASSES ZA.1d + ZA.1e

STANDARD	TEST	RESULTS AND CONFORMITY TO REQUIREMENTS	
EN ISO 5470-1	abrasion resistance	result/class:	in conformity (Δ weight < 3000 mg)
EN ISO 6272-1	impact resistance	result/class:	class II (≥ 20 Nm)
UNI 7928	diffusion of chloride ions	penetration (mm):	0.0
EN ISO 2812-1 - NH_4^+	chemical resistance	result/class:	in conformity

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