

Technical Data Sheet (TDS)

Product Description

EpoRen S8188 is a two-component epoxy-based rendering paste for concrete and steel substrates. **EpoRen S8188** is solvent free and can be applied on both wet and submerged surfaces.

Product features:

- 100% solids water displaceable compound
- Direct application to concrete or steel substrate
- Can be directly applied onto submerged, wet surfaces
- Cures underwater
- Excellent abrasion resistance
- Excellent impact resistance
- Excellent chemical resistance
- Excellent adhesion
- Surface Tolerant and Rust Tolerant
- Non-Flammable and High Build application
- Cures to a glossy smooth finish
- 'Tough, impermeable waterproof upon full cure
- Flexible film has good reverse impact resistance
- Protects surfaces against water vapour and corrosion
- Protects against carbonation and environmental contaminants

Intended Uses

EpoRen S8188 is suited for use as a surface rendering agent in repair on spalling concrete. It is also suited to be used in substrates that cannot be dried out completely, constantly wet and totally submerged substrates (underwater). **EpoRen S8188** is suited for use in marine structures and facilities, tunnels, basement, highway infrastructure, civil structures and buildings

Mix Ratio

2.67 parts by weight of Base A **[SKU8188A]**
 1 part by weight of Hardener B **[SKU8188B]**
 Material is supplied in Uni-Pak kits. It is strongly recommended to mix a unit in proportions supplied

The recommended mixing temperature is between 20 to 25°C (68-77°F). Base temperature exceeding 30°C (86°F) during mixing may reduce pot life.

Product Characteristics

Gloss:	Semi-Gloss
Colour:	White and Grey Shades standard
Weight Solids Mixed: (Typical) SKU 8188A: SKU 8188B (2.67:1)	98 ±2% ISO 3233:1998
Pot Life: 25°C (77°F) *	45 to 60 Minutes
<i>Note: Pot life is reduced when environment temperature increases</i>	
VOC Mixed (Unreduced): EPA Method 24 SKU 299A:SKU 299B (3:1)	No VOC's
Shelf Life:	
Component A	3 years*
Component B	3 years*
<i>Note: For unopened product (25°C (77°F)) stored in well ventilated closed storage area not exposed to direct sunlight and heat source</i>	

Surface Preparation

For best/optimum product performance DAB to ISO 8501-1 Sa 2, SSPC SP-6, Swedish Standard Sa 2 SIS 05 5900 or WJ-2 UHP Hydro blasting or Power Tool cleaning to SSPC-SP-11.

EpoRen S8188 is both Rust tolerant and Wet tolerant and can be applied directly onto to submerged substrates. When recommended surface preparation standards cannot be achieved due to prevailing environmental conditions or operational constraints, a minimum of DAB to ISO 8501-1 Sa 1 or NACE WJ-3 Hydro-Blasting or Power Tooling to SSPC-SP-3 can be accepted as **EpoRen S8188** would offer the best possible performance under prevailing compromised substrate conditions. It is strongly recommended that a Chemcote Speciality Coatings Authorized Technical Representative is consulted to evaluate on site compromised substrate conditions to both manage expectations and optimize/validate product performance.

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Chemical Resistance

EpoRen S8188 Epoxy rendering paste has excellent resistance at ambient temperature to a wide range of industrial chemicals such as:

Petrol
 Xylene
 Sulphuric acid < 25%
 Saturated sodium chloride
 Sodium hydroxide <50%

NOTE: It is important that any spillage is cleared up quickly when it occurs since very much higher concentrations of chemicals may occur on evaporation

Performance Characteristics

Adhesion Pull Test (Applied and Cured in Sea Water)	ASTM D4541 Units in Psig
Dry Substrate	2,400
Wet Substrate	1,700

Elasticity & Strength	Standard Units in MPa
Elasticity Modulus	9800 MPa ISO R 527
Compressive Strength	103 MPa ISO -844
Flexural Strength	64 MPa ISO 178
Flexibility Mandrel bend	No defects -- ½ inch Mandrel 180 ASTM D522

Exposure	Standard Result
Salt Spray Resistance	No defects -2000 Hrs. ASTM B117
Humidity Resistance	No Defects ASTM D1654
Exterior Exposure	No Chalking- 2 years ASTM D659

Film Thickness

EpoRen S8188 has a recommended film build thickness of:

Submerged substrates	Unlimited	Unlimited
Exposed substrates	Unlimited	Unlimited

Drying Information

Normal Version SKU 299B	10°C (50°F)	15°C (59°F)	25°C (77°F)
Touch Dry [ISO 9117/3:2010]	36 Hours	24 Hours	6 hours
Hard Dry [ISO 9117-1:2009]	7 Days	5-6 Days	3-4 Days
Pot Life	No Data	90 minutes	60 minutes

Rapid Cure Version SKU 299B	10°C (50°F)	15°C (59°F)	25°C (77°F)
Touch Dry [ISO 9117/3:2010]	24 Hours	8 hours	NA
Hard Dry [ISO 9117-1:2009]	6 Days	3 days	NA
Pot Life	1 hour		

Note: Dry Times are subject to ambient temperature. With the use of a special catalyst, the Rapid Cure version of SKU 299B shortens touch dry times dramatically. For ambient temperatures exceeding 35°C please consult Royal Coatings Inc. authorized Technical Representative to manage pot life and curing times.

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Product Characteristics

Consistency	Spreadable Paste
Finish	Semi-Gloss
Colours	White, Grey shades
Volume Solids	97 ± 3%
Weight Solids	98 ± 2%
SG of Mix	1.56
Pot Life @ 25° C	30 to 40 minutes
Pot Life @ 35° C	15 to 20 minutes

Mixing

Empty entire contents of hardener into the resin base, ensuring the hardener material is fully scrapped from its own container and transferred to the base. Mix the hardener and the resin manually with a spatula (for smaller kits) or with a slow speed drill agitator, at 600 rpm, until a uniform consistency is obtained. Mix only in the amounts required and in the pre-determined weight ratios packaged. Partial mixing is NOT recommended. Gelled material cannot be used.

Environmental Conditions

For optimum coating performance, product, substrate and ambient temperature should be between 68°F-77°F (20°C-25°C). Condensation during application is not an issue as the product can be applied on to submerged and wet substrates

Recommended Systems

Exposed Substrates	No. of Coats	Total DFT microns
	2 coats	500

Submerged substrates	No. of Coats	Total DFT microns
	2 coats	1000

The systems recommended above are intended guidelines for product use. User shall determine actual coating layers and coating thickness to be used at site, based on existing substrate condition and extent of repair area.

Over Coat Intervals

Overcoated by	10°C		15°C		25°C	
	Min	Max	Min	Max	Min	Max
EpoRen S8188 on itself	Wet on Wet	No Limit	Wet on Wet	No Limit	Wet on wet	No limit

Precautions

- 1) Do not apply under direct sunlight
- 2) Do not apply if ambient temperature is below 5° C
- 3) Do not coat over any existing expansion joints

Packaging

Packed in Standard 5 kg kits comprising Part A resin and Part B Hardener in pre-determined ratio by weight.

Storage

Store in well ventilated sheltered area under cool and dry ambient conditions. Do not store products below 5° C or above 35° C

Shelf Life

Shelf life is 12 months In original sealed containers for ambient storage temperature between 15° C and 35° C. Shelf life will reduce at higher temperatures.