

## Flowfast 301 Hard Seal / Duracon 301

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### Product Description

Flowfast 301 Hard Seal is a low viscosity, UV-resistant, blue-violet, 2 component reactive resin based on methyl methacrylate (MMA). After polymerisation the blue-violet colouring is no longer visible.

### Features and key benefits

- ) Hard and abrasion resistant
- ) Excellent chemical resistance
- ) Easy to apply
- ) For heavily trafficked areas

### Product Information

#### Applications

Flowfast 301 Hard Seal should only be used as a sealer for Flowfast Floor Coatings. Flowfast 301 Hard Seal is particularly suited in dry areas with the demand of high resistance against abrasion and chemicals.

#### Important advice

A permanent water loading can result in a white discoloration of the Flowfast 301 Hard Seal sealer. In such service conditions we generally recommend the use of Flowfast 305 Standard Seal LV or Flowfast 319 Flexible seal as second layer. Please consult our Technical Service Department. Where Flowfast floors are used in areas of hot water loading, always gather waste or flowing water (particularly hot water) into channels and convey it into a proper drainage system. Provide for enough gullies.

#### Certificates and approvals

CE according to EN13813 (when used as part of complete system)

## Environment and health

Suitable protective clothing, gloves and safety goggles must be worn during mixing and application of Flowfast 301 Hard Seal.

In case of contact with eyes rinse immediately for a long period of time and seek medical advice.

In case of contact with skin clean immediately with water and soap.

Flowfast 301 Hard Seal is highly flammable; keep away from heat and all sources of ignition and do not smoke. The stirrer as well as all the other electric appliances used on the application site must be explosion-proof versions.

Safety Data Sheet must be read and understood before use.

## Technical Information

### Technical Characteristics (liquid state)

Viscosity, 25 °C: (EN DIN 53019)	65 - 100 mPa·s
Density, 23 °C: (ISO 1183)	1.0 kg/l
Pot life / processing time at 20 °C:	approx. 15 min
Curing time at 20 °C:	approx. 60 min
Flash point: (ISO 1516)	+ 11.5 °C

### Technical Characteristics (cured state)

Tensile strength at RT: (EN ISO 527)	39.3 N/mm <sup>2</sup>
Elongation at maximum strength at RT: (EN ISO 527)	2.47 %
Elongation at fracture at RT: (EN ISO 527)	2.47 %
Modulus of elasticity at RT: (EN ISO 527)	2060 N/mm <sup>2</sup>
Density, 20 °C: (ISO 1183)	1.1 kg/l

Please note that an objective comparison with other data is only possible if norms and parameters are identical.

## Packaging

180 kg steel drums, 20 kg metal pails.

## Storage

Store in a cool and dry place and in originally closed packaging. The optimal storage temperature is 15 - 20 °C. Maximum storage temperature is 30°C

Protect from weather and moisture / contaminant ingress.

## Shelf Life

12 months in unopened pack.

The date of manufacture is given on the label in the format xxxxxx-140708C3, where the date is 2014 July 8th. xxxxxx and C3 are internal code.

## Usage Guidelines

### Application Conditions

Ambient temperature range:	0°C - +35°C
Substrate temperature range:	0°C - +35°C
Ambient relative humidity:	<95%
Substrate relative humidity (for primers)	<5.5% (TRAMEX scale or 92% RH BS 8203)

- ) The substrate temperature should always be at least 3°C above the dew point temperature.
- ) In closed rooms a forced ventilation with at least 7-fold air exchange per hour is recommended.

To assess possibility of application outside of these conditions or application temperatures below 0°C, please consult our Technical Department.

### Substrate Preparation

Assumes a concrete base with a minimum 25 N/mm<sup>2</sup> compressive strength and 1.5 N/mm<sup>2</sup> tensile strength (latter as tested to EN 1542). Perform preliminary tests on critical and unknown surface. Glazed surfaces must be removed from tiles before applying the primer (e.g. by diamond grinding or shot blasting). Loose tiles and tiles over hollows must be removed. Steel substrates must be prepared to SA 2.5 (to DIN 55929)

The area to be coated, must be pre-treated with a suitable Flowfast Primer (e.g. Flowfast 101 Standard Primer) including sanding. The substrate must be dry, firm, solid and free of dust, fat and oil. Particles that can interfere with adhesion need to be removed.

For further details, see our General Preparation and application guidelines for Flowfast floor protection systems.

### Mixing

Prior to use Flowfast 301 Hard Seal must be carefully stirred to achieve a uniform distribution of the paraffin contained in the product.

Flowfast 301 Hard Seal is thoroughly mixed with the Flowfast Catalyst (C2) (50 % dibenzoyl peroxide), in accordance with the below guidelines.

It should be noted that the amount of catalyst powder to be added depends upon the temperature.

<b>Guidelines for Flowfast Catalyst (C2) addition to Flowfast 301 Hard Seal</b>		
Temperature	Weight percentage Catalyst (C2)	Gram Catalyst (C2) per 20 kg
30 °C	1.0 %	200 g
20 °C	1.5 %	300 g
10 °C	3.0 %	600 g
0 °C	4.0 %	800 g
< 0 °C	4.0 %	800 g

**Remark:**

The optimal product temperature is 15 – 20 °C.

At temperatures below 0 °C, the accelerator Flowfast 404 Accelerator should also be added.

For further information contact our Technical Department.

**Conversion:**

1 cm<sup>3</sup> of Flowfast Catalyst (C2) = 0.64 g

1 g of Flowfast Catalyst (C2) = 1.57 cm<sup>3</sup>

Add the required amount of catalyst to the resin and additive mix. Mix with slow speed drill and helical spinner, taking care not to entrain air.

The topcoat can be coloured with the appropriate pigment on the job site (10wt% powder pigment & 10wt% talc (e.g. Fintalc M15)

**Application**

The Flowfast system to be sealed must be dry, clean, free of dust and fat. Any fresh Flowfast coating system must be completely cured and cooled down. As a general principle all Flowfast coating systems can be resealed with any Flowfast sealer after proper cleaning.

The sealer must be applied to the wearing layer within 4-6 hours to prevent adhesion problems.

Immediately after the catalyst has been stirred in, the sealer is poured onto the floor in stripes (do not apply directly out of the mixing pails) and distributed onto the coating with a short-pile paint roller. On quartz broadcasted coatings sealer can be pre-spread before rolling with a notched

rubber squeegee. To avoid any possible formation of microbubbles in the sealer surface it is important to work with freshly mixed material, i.e. to catalyse smaller batches.

Material shall be spread and rolled immediately to an even layer thickness of not more than 0.3 – 0.8 kg/m<sup>2</sup>. If a thicker layer is required, it must be applied in two separate coats. In all cases, the final applied layer needs to be applied with a consumption of not more than 0.4 kg/m<sup>2</sup> to avoid yellowing.

For further details see our General Preparation and application guidelines for Flowfast floor protection systems.

## Coverage

Less than 0.4 kg/m<sup>2</sup> in one coat or less than 0.6 kg/m<sup>2</sup> in 2 coats.

## Curing

Can be walked on after 1 hour at 20°C. Fully chemical cure after 2-3 days.

## Cleaning

Clean tools with Flowfast 405 Cleaner or solvents (MEK, acetone) immediately after application, cured remains can be removed only by mechanical means

## Technical Service

Contact Tremco CPG (Country)

## Guarantee

Tremco CPG (Country) warrants all goods to be free from defects and will replace materials proven to be defective but makes no warranty as to appearance of colour. The information and recommendations herein are believed by Tremco CPG (Country) to be accurate and reliable.

**CE-certification** – see the declaration of performance (DoP) for details