

S&P Resin 55 HP

Epoxy adhesive (saturant) & primer



A Simpson Strong-Tie® Company

The information in this technical data sheet is valid for the S&P range of products, systems and solutions.
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DESCRIPTION

S&P Resin 55 HP is a high performance, two-component, epoxy resin adhesive used to prime substrates, saturate S&P sheet fabrics and apply near surface mounted S&P C-Laminate.

WHERE TO USE

- S&P Resin 55 HP can be used with the following S&P systems:
 - S&P C-Sheet
 - S&P G-Sheet
 - Near surface mounted S&P C-Laminate

PERFORMANCE FEATURES

- Good wettability and stability
- High performance
- Easy to mix and apply
- Can be applied by machine
- Very good adhesion to most construction materials
- Formulated without solvent
- No primer needed
- Low shrinkage

GENERAL FEATURES

PRODUCT DATA

Generic description

S&P Resin 55 HP

Appearance

Comp. A – Translucent yellow liquid epoxy resin

Comp. B – Transparent hardener

Size

6 kg unit (comp. A 4.2 kg + comp. B 1.8 kg)

Storage

24 months in original packaging

Optimal storage +10°C to +25°C

CERTIFICATION



This product conforms to EN 1504-4:2004.

Principles and methods according to EN 1504-9: 2008

Principle 4: Structural strengthening:

- Method 4.3: Bonding plate reinforcement



TECHNICAL PROPERTIES

Property	Test Method	Unit	Minimum requirements according to EN 1504-4			Value		
Density	In house test	kg/dm ³	-			1.0 - 1.1		
Mix ratio A:B	-	By weight	-			4.2 : 1.8		
Pot life at 21°C	In house test	Minutes	-			40		
Pot life at 35°C	In house test	Minutes	-			30		
Open time at 21°C	EN 12189:2000	Minutes	-			45		
Open time at 35°C	EN 12189:2000	Minutes	-			30		
Final cure	-	Days	-			7		
Application temperature	-	°C	-			+8 °C to +35 °C		
Hardness Shore D	In house test	HD	-			> 70		
Compressive strength	EN 12190:1999	MPa	≥ 30			≥ 100		
E-Modulus (compression)	EN 13412:2008	MPa	≥ 2000			≥ 3200		
Coefficient of thermal expansion	EN 1770:1999	µm/m °C	≤ 100			≤ 65		
Tg Glass transition temperature	EN 12614:2006	°C	≥ 40			53		
Linear shrinkage	EN 12617-1:2004	%	≤ 0.1			0.02		
EN 1504-9 Method 4.3: Bonding plate reinforcement								
Adhesion steel to steel (shear strength)	EN 12188:2000	MPa	50° ≥ 50	60° ≥ 60	70° ≥ 70	50° ≥ 50	60° ≥ 60	70° ≥ 70
Adhesion steel to steel (tensile strength)	EN 12188:2000	MPa	≥ 14			≥ 14		
Durability of structural bonding plate Thermal cycles Warm-moist environment	EN 13733:2002	-	No failure in specimens			Pass		

Above test results are carried out in laboratory conditions at +20 °C and 65 % RH unless otherwise stated.

APPLICATION

S&P Resin 55 HP should be applied by well-trained and experienced specialist. The S&P Resin 55 HP is delivered in the prescribed mixing ratios. The hardener (Comp. B) is poured into the resin (Comp. A). It is important that the hardener is used up completely. Mixing of both components is preferably done by means of a low speed drill equipped with a mixing paddle. Mix thoroughly and carefully. Scrape the sides and bottom of the container while mixing to ensure that the hardener is evenly distributed vertically as well. After blending, the mix must be homogeneous, i.e. without streaks. The temperature of both components at the moment of mixing should ideally be 15–20 °C. Higher temperatures reduce the application time considerably.

The S&P Resin 55 HP must be protected from moisture for 6–8 hours after the application. Should any contact with moisture occur during this period, the surface will turn white and tacky; the resin below, however, will still cure perfectly. In discoloured or tacky areas, the bond to any subsequent coating is either reduced or completely prevented.

Substrate preparation

The substrate must be free of substances that can influence adhesion (oils, fats, waxes, etc.). In addition, the substrate must be dust-free, clean, hard and dry

Substrate moisture content 4%

Information

When reinforcing elements with the S&P FRP System, the tensile forces of the engraved laminates or fabrics must be transmitted through the adhesive into the substrate. A mechanical treatment (cleaning) of the substrate must therefore always be carried out. The usual methods such as sanding, milling, sandblasting, etc. can be used. The substrate must be levelled before the fabrics are installed.

Dosing

Approx. 0.7-1.1 kg/m². Adhesive consumption depends on the temperature, roughness and porosity of the substrate and the applied fabrics. The actual consumption can therefore vary.

ACCESSORIES

S&P offers special tools and accessories that facilitate the processing of resins, such as gluing machines or application rollers.

TESTING

Please contact us if you require any information regarding tests that have been conducted. Test reports may be available.

CLEANING

Tools cleaning

Mixture that has not yet hardened can be washed off with S&P Cleaner. Mixture that has hardened can only be removed by mechanical means.

WARNING

The shelf life of the resin must be respected.

S&P's range of products are for industrial use. They must be installed by specialised personnel and competent professionals with adequate training. The installation instructions must be followed and can be found in S&P application manuals and several "Guideline" documents / existing technical notes.

HEALTH & SAFETY

Important safety instructions

For detailed safety information, we recommend that you see the current safety data sheet which is available on www.sp-reinforcement.eu or you can contact us on +41 41 825 00 70.

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