CRESTAFIX® 630PA

Polyester, Vinyl Ester and Hybrid Bonding Pastes

Technical Data Sheet

Product overview

Crestafix® 630PA is pre-accelerated vinyl ester based high performance bonding paste. It is a non-sagging, filled compound with high strength, specifically designed for the assembly and bonding of GRP mouldings. Such applications include panels, inserts, internal frames, ribs, internal core materials and composite constructions. Crestafix® 630PA provides high shear-strength bonded joints without the need for mechanical fixings.

Features and benefits

Highly thixotropic	No sagging on vertical surfaces
High Strength	Ability to create strong, durable bonds and improve stress distribution of a finished part.
Vinyl ester base	Lower shrinkage leads to excellent adhesion and good elongation at break
Colour change system	Visual check for effective catalyst mix
Low Density	Ideal for applications where light weighting is critical

Typical Application Properties	
Working time[1]	50 – 70 minutes
Fixture Time[2]	180 – 240 minutes
Gap Filling	1 – 25 mm (0.04 – 1.0 inch)
Colour Change	Deep Purple to Brown
Time to Peak Exotherm	90 – 110 minutes
Peak Exotherm	90°C – 130°C (194°F – 266°F)

Typical Mechanical Properties	
GRP Lap shear strength[3, a]	6.5 – 7.5 MPa (940 – 1080 psi)
Tensile strength[4, b]	50 – 60 MPa (7250 – 8700 psi)
Tensile modulus[4, b]	3.3 – 3.7 GPa (478,000 – 536,000 psi)
Tensile elongation[4, b]	2.5 – 3.5%
Hardness	80 – 90 Shore D
Heat Deflection Temperature[b]	60°C (140°F)

All results have been achieved with three different peroxide catalysts. Low reactivity MEKP, Medium reactivity MEKP and a CHP catalyst; all added at 2% v/w into the adhesive. Post cure cycles are as follows:

***a** – 16 hours @ 40°C (104°F), **b** –3 hours @ 80°C (176°F)*

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Typical Liquid Properties	
Viscosity[5] 6.0s^{-1}	90,000 – 130,000 cP
Viscosity[5] 0.6 s^{-1}	950,000 – 1,300,000 cP
Specific gravity	1.05 – 1.15
Shelf life[6]	6 months

Substrates

Crestafix® 630PA is suitable for use on GRP laminates but also can be used on timber and plasterboard. However, it is recommended that trials are carried out to ensure adequate bond strengths are obtained.

Please contact Scott Bader Technical Services for information on other substrates and advice.

Surface preparation

The surfaces to be bonded should be clean, dry and free from any contamination. It may be necessary to mechanically abrade the surfaces to be bonded in order to obtain the bond strength required.

Application

Crestafix® 630PA is supplied pre-accelerated, requiring only the addition of catalyst to start the curing reaction. The recommended catalyst is a medium reactivity MEKP catalyst which should be added at 2% v/w into the bonding paste. However, the results on this data sheet have also been observed with a low reactivity MEKP catalyst and a CHP catalyst. The catalyst should be thoroughly incorporated into the material with a low shear mechanical stirrer where possible, taking care to keep air entrapment to a minimum. The bonding paste, moulding and workshop should all be at, or above, 15°C (59ºF) before curing is carried out. Recommended temperature range for application is between 18°C and 25ºC (64°F and 77ºF). Each surface should be coated with the catalysed bonding paste and held together until the adhesive has hardened. The use of additional pigments or fillers is not recommended as they can affect the performance of the adhesive.

For industrial/commercial use only. The user must determine the suitability of a selected adhesive for a given substrate and application. Contact your local Scott Bader representative for questions or assistance with the selection of adhesives for your use. This product is intended for use by skilled individuals at their own risk. Recommendations contained herein are based on information we believe to be reliable. The properties and strength values have been obtained under controlled conditions at the Scott Bader laboratory.

Coverage

As a rough guide, 3.3Kg (7.2 lbs) of bonding paste will cover one square metre to a depth of approximately 3mm (0.12 inch).

Storage and shelf life

Crestafix® 630PA should be stored between 2°C and 23°C (36°F and 77°F) in the original, unopened container in a dry, well-ventilated place. Protect from freezing and direct sunlight. Avoid contact with oxidising agents.

The shelf life is defined from date of manufacture when stored as recommended. The expiry date is indicated on product labels.

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Packaging

Crestafix® 630PA is supplied in 25Kg (55 lbs) and 225Kg (496 lbs) containers.

Health and safety

See separate Safety Data Sheet.

Notes

1. Working time measured with three different peroxides added at 2% into the adhesive at 25°C (77°F).
2. Fixture time defined using and ISO-4587 lap shear sample, 3mm bondline thickness with 23ºC (73ºF) ambient temperature achieving >1.4MPa.
3. Tested to BS ISO 4587
4. Tested to BS EN ISO 527-2
5. Measured using RV1 at 25ºC (77ºF) 35mm PP
6. Shelf life is defined from the date of manufacture if stored as recommended.

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