

1150PA

Technical Data Sheet



Product Overview

Crestomer® 1150PA is a two part, pre-accelerated, highly thixotropic structural adhesive based on unsaturated urethane acrylate in a styrene monomer. It is used in many structural composite applications and has excellent adhesion to FRP laminates, core materials, wood, and some metals. It can be used for bonding diesel tanks, contour joints in FRP components, to build up damaged areas and to bond "green" FRP.

Features and Benefits

Urethane acrylate base

Excellent retention of toughness

Highly thixotropic

Controlled cure and exotherm behaviour

Short Fixture Time

Low exotherm during cure

Over 100% Elongation

Easy to apply

Improved aesthetics and better surface finish

Excellent adhesion and high elongation at break

Non sagging on vertical surfaces

Excellent fatigue and impact resistance

Increased productivity and reduced cycle times

Low risk of print through

A truly flexible structural adhesive

Saves you time and cost

Application properties	
Working time ¹	50 minutes
Fixture time ²	5 hours
Gap filling	1 – 15 mm/ 0.04 - 0.6 inch
Colour change (over cure)	None
Recommended application temperature	18°C - 25°C / 64°F - 77°F

Mechanical properties	
Tensile strength ⁵	22 - 25 MPa
Tensile modulus ⁵	1000 - 1500 MPa
Tensile elongation ⁵	100 - 120%
Approvals	Lloyds



Liquid properties	
Product	1150PA
Viscosity	Thixotropic Gel
Specific gravity	1.05
Mixed ratio ³ (by volume)	50:1
Appearance	Mauve gel
Shelf life ⁴	12 months

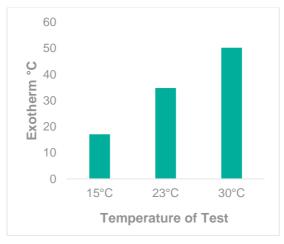
Recommended Substrates

	Recommended substrates ⁶ (Lap shear / Cleavage strength MPa)
Metals	Stainless Steel ⁷ – 11 – 12 MPa Aluminium ⁷ 5 – 8 MPa
Wood	Marine ply ⁸ - 2 – 4 MPa Balsa ⁸ 2 – 4 MPa
Composites	GRP/FRP ⁸ – 12 – 14 MPa Polyester resin DCPD ⁸ – 7 – 8 MPa Vinyl ester Epoxy

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

Exotherm of Crestomers®

High exotherm in an adhesive can cause the substrate to distort and give poor aesthetic characteristics to the parts being bonded. The chemistry of Crestomer® adhesives ensures that high exotherm temperatures, a characteristic of some other adhesives, does not occur. The graph shows the exotherm temperatures of Crestomer® adhesives over a range of test temperatures.





Surface preparation

Crestomer® 1150PA has excellent adhesion to FRP material provided that the surface has been maintained free of dust and grease. This can be guaranteed by the use of proprietary strippable cloths such as peel ply (without lubricant contaminates). If the laminate surface is more than three days old, it is recommended that they are lightly abraded and wiped with acetone or styrene on a lint-free cloth prior to bonding.

Application

Crestomer® 1150PA is supplied pre-accelerated. The required hardener is a medium reactivity MEKP catalyst. The catalyst is added at 2% v/w. Crestomer® 1150PA can be applied with a spatula or from a dispensing unit, taking care to keep air entrapment to a minimum. Application should always be carried out at temperatures above 15°C / 59°F. Recommended temperature range for application is between 18°C and 25°C / 64°F - 77°F. 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 are obtained under controlled conditions at the Scott Bader laboratory.

Storage and shelf life

Crestomer® 1150PA should be stored between 2°C and 23°C/36°F and 73°F in the original unopened container in a dry well ventilated place. Protect from freezing and direct sunlight. Avoid contact with oxidising agents. Exposure to temperatures outside these conditions will affect shelf life. Ideally containers should be opened only immediately prior to use.

The shelf life for Crestomer® products is defined from date of manufacture if stored as recommended. The expiry date is indicated on the product labels.

Packaging

Crestomer® 1150PA is supplied in 200 litre / 45 gallon drums and 19 litre / 4 gallon pails.

- 1. Geltime measured with 100g mass of adhesive at 25°C/77°F. Using 2% Butanox M50 catalyst.
- 2. Time taken at 23°C / 73°F (ambient temperature) to achieve 1.4MPa strength in lap-shear tests according to BS ISO.
 - 3. Mix ratio based on volume and weight for both machine dispensing and hand mixing.
 - 4. The shelf life for Crestomer® products is defined from the date of manufacture if stored as recommended. The expiry date is indicated on the product labels.

5. Test to BS EN ISO 527-2

- Metals test to ASTM D1002 for Lap Shear Strength, Composites and Marine Ply test to ASTM 5868 for Lap Shear Stength, Balsa tested to ASTM D3807 for Cleavage Peel. All at 23°C (73°F)
 - 7. Adhesive Failure When Tested

8. Substrate Failure When Tested

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