



### Product Overview

Crestomer 1152PA 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. Due to its excellent adhesion to a wide range of materials, 1152PA can also be used a general purpose adhesive. 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	▶	Improved aesthetic and better surface finish
Excellent retention of toughness	▶	Excellent adhesion and high elongation at break
Highly thixotropic	▶	Non sagging on vertical surfaces
Controlled cure and exotherm behaviour	▶	Excellent fatigue and impact resistance

#### Application Properties

Working Time <sup>1</sup>	50 Minutes
Fixture Time <sup>2</sup>	10 hours
Gap Filling	1 – 25 mm/ 0.04 - 1.0 inch
Colour change (over cure)	None
Recommended Application Temperature	18°C - 25°C/ 66°F - 77°F

#### Mechanical Properties

Tensile Strength <sup>5</sup>	22 - 25 MPa
Tensile Modulus <sup>5</sup>	1000 - 1500 MPa
Tensile Elongation <sup>5</sup>	100 - 120%
Hardness	65 Shore D
Water Absorption <sup>6</sup>	0.36%
Approvals	Lloyds, RINA, DNV.GL

## Liquid Properties

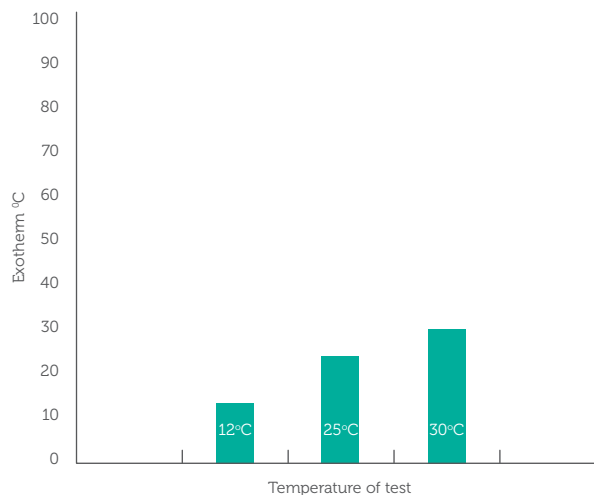
Product	1152PA
Viscosity <sup>3</sup>	250,000 - 320,000 cP
Specific Gravity	1.05
Volatile Content	47%
Mixed Ratio <sup>4</sup> (by Volume)	50:1
Appearance	Mauve Gel
Shelf Life	12 months

## Recommended Substrates

	Recommended Substrates (Lapshear Strength MPa <sup>6</sup> )	Non - Recommended Substrates
<b>Metals</b>	Stainless Steel Aluminium	-
<b>Wood</b>	Marine Ply Balsa	-
<b>Composites</b>	GRP/FRP Polyester Resin DCPD Vinyl Ester Epoxy	-

## 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 do not occur. The graph shows the exotherm temperatures of Crestomer adhesives over a range of test temperatures.



## Surface Preparation

Crestomer 1152PA 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 stripable 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, clean cloth prior to bonding.

## Application

Crestomer 1152PA is supplied pre-accelerated. The required hardener is Butanox M50 (or other equivalent MEKP catalyst). The catalyst is added at 2% v/w. Crestomer 1152PA 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 1152PA 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 1152PA is supplied in 25Kg/ 55lbs and 200Kg/ 440lbs containers.

## Health and Safety

See separate Material Safety Data Sheet.

1. Gelttime 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. Measured using Brookfield Viscometer at 25°C/ 77°F.

4. Mix ratio based on volume and weight for both machine dispensing and hand mixing.

5. Test to BS EN ISO 527-2.

6. BS EN ISO 62.



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