

# CRESTOMER 1152PA

## Structural Filleting Material

### Introduction

Crestomer 1152PA can be used in a wide range of applications but is particularly effective for bonding wooden or composite bulkheads into FRP boat hulls.

Crestomer 1152PA is based on Scott Bader's innovative urethane acrylate technology and exhibits exceptional impact strength and toughness.

Crestomer 1151A is a variant of this adhesive giving a shorter working life and more rapid cure.

### Approvals

Crestomer 1152PA is approved by Det Norske Veritas and has a Statement of Acceptance from Lloyd's Register of Shipping for use in the construction of craft built under their Survey. It is also approved by the MOD for use under NES 166.

### Features and benefits

Crestomer 1152PA fillets have the following advantages over laminated FRP joints

- a stronger bond with greater movement
- significant time, cost and weight savings
- greatly improved cosmetics
- a huge reduction in Styrene emission

### Preparation of substrates

Please follow the following options depending on the age and type of substrates to be bonded. We recommend that a representative test sample is bonded with the recommended pre-treatment before using any adhesive in production.

1. Apply an appropriate peel ply to the areas to be bonded during construction of an FRP laminate, and remove it immediately before the adhesive is used.
2. For a Gelcoated surface, moulded FRP laminate, metals or air surface of FRP laminates more than 3 days old degrease, abrade thoroughly 100 grit (or coarser) abrasive, and degrease again with Acetone or Styrene and a clean, lint free, cloth.
3. Wiping with an Acetone dampened cloth is the minimum requirement to ensure that wood or FRP laminates less than 3 days old are clean, dry and dust-free. Bond strengths to wood can vary because it is a natural material.

Laminates made using DCPD resins are more difficult to bond, and guidance should be sought from Scott Bader technical service.

### Applications

Crestomer 1152PA should be used for structural filleting applications or wherever the primary requirement is for a strong, tough, highly impact resistant bond.

## Formulation

Crestomer 1152PA is supplied pre-accelerated and non-slumping. It should be used with an MEKP such as Butanox M-50 and applied in a temperature range of 15-30°C. It gives best results when used between 18-25°C. Although hand mixing and application is possible, maximum efficiency is achieved when Crestomer 1152PA is applied with a 50:1 bulk dispensing machine. Once applied, Crestomer 1152PA should be shaped with an appropriate fillet tool. Fillets greater than 35 mm should be applied in multiple layers to avoid excessive exotherm. A time lapse of two hours from gelation should be allowed between layers.

The working time at 25°C is approximately 45 minutes with 2% Butanox M-50.

Curing at temperatures below 15°C should be avoided since styrene evaporation from the surface may lead to cracking.

## TYPICAL PROPERTIES

The following tables give typical properties for Crestomer 1152PA when tested in accordance with appropriate SB, EN, BS EN or BS EN ISO test methods.

Property		Liquid Adhesive
Appearance		Hazy gel
Viscosity @ 25°C		Non slumping
Specific gravity at 25°C		1.03
Volatile content	%	47
Stability in the dark at 20°C	months	3
Geltime at 25°C (2% Butanox M-50)	minutes	50
<b>Fully Cured Casting</b>		
Hardness	Shore D	65
Water Absorption 24hrs at 23°C	%	0.36
Tensile Strength	MPa	26
Tensile Modulus	MPa	500
Elongation at Break	%	100
Gardner Impact Strength	Kg/cm	200
Yield Stress at 7% strain	MPa	17
Volume shrinkage on cure	%	5

## Storage

Crestomer 1152PA should be stored in suitable, closed containers. It is recommended that the storage temperature should be less than 20°C where practical, but should not exceed 30°C. Ideally, containers should be opened only immediately prior to use.

## Packaging

Crestomer 1152PA is supplied in 25 kg and 200 kg containers.



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