CRESTOMER®

Urethane Acrylate Structural Adhesives

ADHESIVES by SCOTT BADER

WHY CRESTOMER

1 Trusted by the world's largest boatbuilders since 1984

2 250,000+ boats bonded with Crestomer

3 Approved by naval architects globally

Lloyd's Register · ClassNK · DNV · RINA

Scan for our marine page

Crestomer Qualities

Low exotherm during cure
Low risk of print through

Easy to apply
Saves you time and cost

>100% elongation
A truly flexible structural adhesive

Crestomer® Dispensing Equipment

- Crestomer® Advantage 10, 30 and 60 cartridges can be used with a manual or pneumatic gun. Suitable dispense guns and static mixers are available from Scott Bader.
- Crestomer® adhesives can be dispensed directly from pails and drums using a manual or automated dispensing machine/ putty gun.
- Scott Bader technical support can provide advice on appropriate dispensing equipment.

Product Range Overview

Crestomer® Product	Description	Approvals	Appearance	Working time (mins)	***Fixture time (hours)	Tensile strength (MPa)	Tensile modulus (MPa)	Tensile Elongation (%)	Specific Gravity (g/ml)
1150PA	High performance structural adhesive with shorter fixture time	Lloyds, Class NK	Mauve Gel	*50	5	22 - 25	1000 - 1500	100 - 120	1.05
1151A	Adhesive for bulk application Amine accelerated	Lloyds, DNV.GL, Class NK	Green/ Yellow Gel	**25	2.5	22 - 25	1000 - 1500	100 - 120	1.05
1152PA	High performance structural adhesive	Lloyds, RINA, DNV.GL, Class NK	Mauve Gel	*50	8.5	22 - 25	1000 - 1500	100 - 120	1.05
1153PA	High performance structural adhesive with long open time	Lloyds, RINA, Class NK	Mauve Gel	*90	8.5	22 - 25	1000 - 1500	100 - 120	1.05
1154PA	High performance structural adhesive minimising distortions and impact on bonded substrates	Lloyds	Mauve Gel	*90	8.5	22 - 25	400 - 800	100 - 120	1.05
1186PA	Multi-purpose structural adhesive	Lloyds	Grey Paste	*50	5.5	13 - 16	700 - 900	4 - 7	1.30
1196PA	Low density structural core bonding adhesive	Lloyds, DNV.GL	Pink Paste	*50	6.5	19 - 22	1000 - 1500	4 - 7	0.60
Advantage 10	High performance structural adhesive for bonding a wide range of substrates. Minimal surface preparation required. Pre-packed in cartridges.	Lloyds	White Paste	10	1.2	22 - 25	400 - 600	100 - 120	1.15
Advantage 30		Lloyds, RINA, DNV.GL	White paste	30	2.5	22 - 25	400 - 600	100 - 120	1.15
Advantage 60		Lloyds	White paste	60	3.0	22 - 25	400 - 600	100 - 120	1.15

* Medium reactivity MEKP catalyst ** Medium reactivity dibenzoyl peroxide paste catalyst *** Time taken at 23°C to achieve 1.4MPA strength in lap-shire tests according to BS ISO 4587

Pack Size

The Crestomer® range is available in 20 litre kegs and 200 litre drums. Weights vary depending on S.G. Crestomer® Advantage 10, 30 and 60 are packed in 10:1 380ml coaxial cartridges. Manual and pneumatic guns plus static mixers are also on the product range.

Bond Strengths With Different Substrates

The following tables give examples of bond strengths and types of failure mode observed when bonding various substrates with the Crestomer range.
All figures are lap shear strengths (MPa).

Crestomer® 1152PA
Results achievable with Crestomer® Advantage and Crestomer® 1153PA are similar

	FRP	Marine Ply	Aluminium*	Stainless Steel*
FRP	10	-	-	-
Marine Ply	-	5	-	-
Aluminium	-	-	15	-
Stainless Steel	-	-	-	12

Crestomer® 1186PA

	FRP	Marine Ply	Aluminium	Stainless Steel
FRP	10	-	-	-
Marine Ply	-	5	-	-
Aluminium	-	-	10	-
Stainless Steel	-	-	-	8

Crestomer® 1196PA

	Balsa	PVC Foam (80kg/m3)
FRP	10	6

Substrate failure
Cohesive failure

*Requires surface preparation

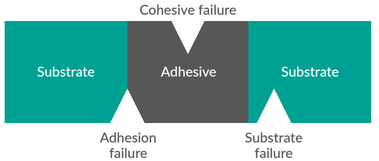
Fillet joints constructed using Crestomer® 1152PA are stronger and aesthetically superior to FRP laminated joints as well as being quicker to manufacture and giving far lower styrene emission.

Substrate failure
indicates that the adhesive is stronger than the materials being bonded together.

Cohesive failure
is a failure of the bulk adhesive itself and is characterised by a film of adhesive being left on both sides of the failed joint.

Adhesive failure
occurs in the bond line between the adhesive and substrate and is characterised by the film of adhesive being left on one side of the failed joint.

Adhesive failure modes



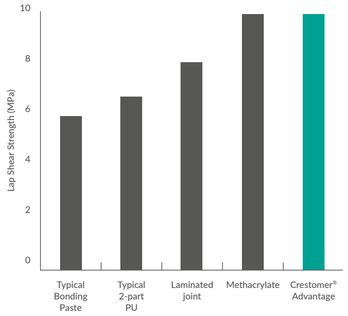
Comparisons With Competitive Materials

Compared to other adhesives,
Crestomers offer the following benefits:

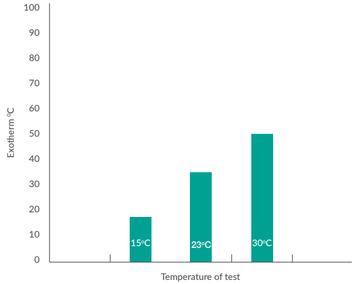
- Monomer type identical to polyester resins
- Cured with conventional peroxides
- Low exotherm during cure
- Available in a range of working and fixture times
- Ease of application
- Cost effective

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.

FRP to FRP bond strength



Exotherm of Crestomer® adhesives



Crestomer® In Action

Small fixings

Advantage 10/30/60 cartridges

Deck to hull bonding

Crestomer® 1150PA
Crestomer® 1151PA
Crestomer® 1152PA
Crestomer® 1153PA
Crestomer® 1186PA
Crestomer® Advantage 30 & 60

Core bonding

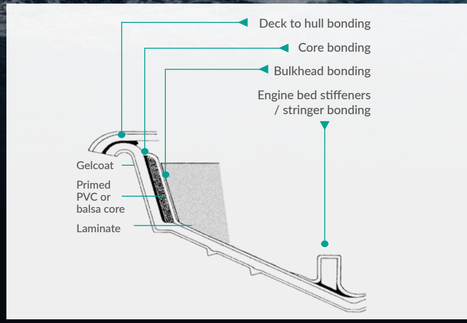
Crestomer® 1196PA

Bulkhead bonding

Crestomer® 1150PA
Crestomer® 1151PA
Crestomer® 1152PA
Crestomer® 1153PA

Engine bed stiffeners / stringer bonding

Crestomer® 1150PA
Crestomer® 1151PA
Crestomer® 1152PA
Crestomer® 1153PA



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We invest in people Gold

ADHESIVES

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