

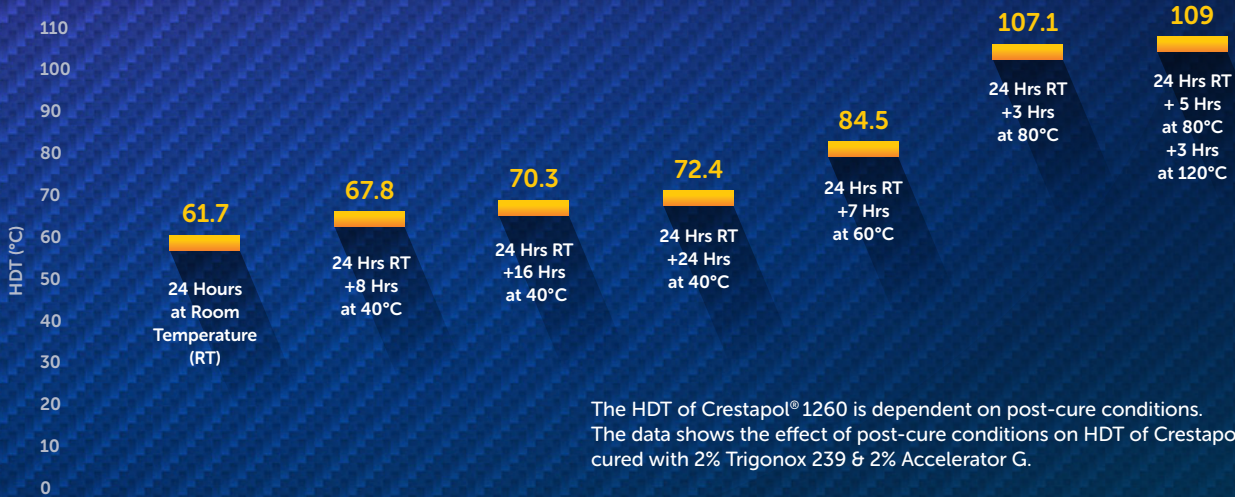
PRODUCT PROPERTIES AND INFORMATION GUIDE

Crestapol® 1260 is a low viscosity urethane acrylate type resin which is suitable for infusion, Resin Transfer Moulding (RTM) and similar processes at room temperature, and can be infused at vacuum levels down to -1.0 Bar.

KEY FEATURES OF CRESTAPOL® 1260

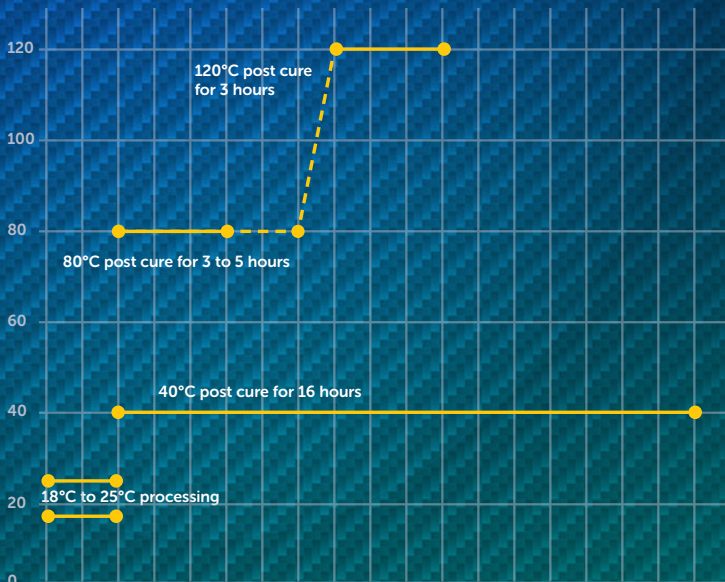
- › Excellent mechanical performance and durability using only moderate temperature post-curing cycles
- › High temperature performance - Tg 130°C / HDT 109°C
- › Compatible with carbon fibre reinforcement materials and general purpose sizing agents
- › Ability to vary cycle time eliminates the need to stock different resin grades

HDT - EFFECT OF POST-CURE ON HDT FOR CRESTAPOL® 1260

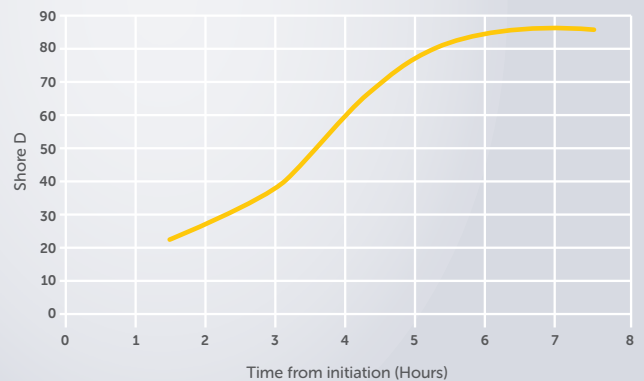


The HDT of Crestapol® 1260 is dependent on post-cure conditions. The data shows the effect of post-cure conditions on HDT of Crestapol® 1260 cured with 2% Trigonox 239 & 2% Accelerator G.

TYPICAL POST-CURE CYCLES FOR CRESTAPOL® 1260

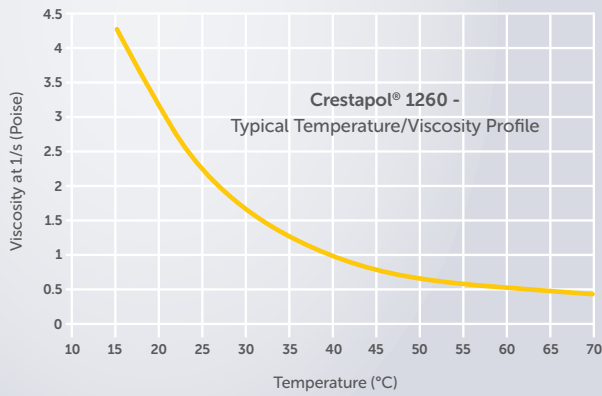


TYPICAL ROOM TEMPERATURE THIN SECTION CURE DEVELOPMENT (VACUUM INFUSED 600T PLAIN WOVEN GLASS FABRIC)

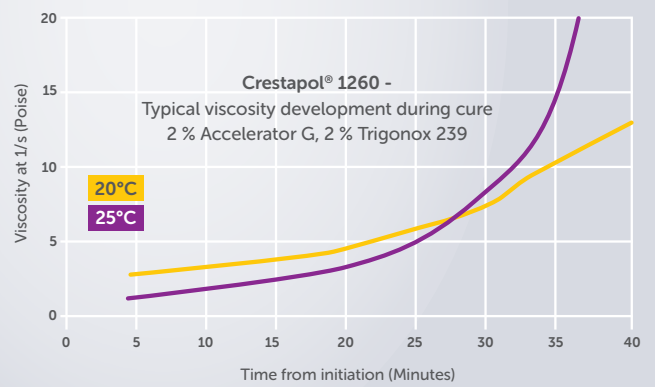


Crestapol® 1260 - Typical Shore-D hardness development 2% Accelerator G, 2% Trigonox 239. Room temperature vacuum infusion processing. 2 ply 600T woven glass fabric laminate.

EFFECT OF TEMPERATURE ON VISCOSITY



POST INITIATED VISCOSITY BEHAVIOUR



MIX RATIOS AND PROCESSING

- The recommended cure system for Crestapol® 1260 is Trigonox 239 with Accelerator G
- Post-cures of either 40°C for 16 hours, 80°C for 3 hours, or 80°C for 5 hours + 120°C for 3 hours are recommended to achieve maximum properties

Typical Liquid Resin Properties of Crestapol® 1260

Density (25°C)	1.041 g/cm ²
Viscosity (ICI cone & plate, 25°C)	2.2 poise
Gel time (100g, 25°C)	35 minutes

Typical Cast Properties of Crestapol® 1260

24 Hrs RT, 3 Hrs 80°C post-cure
For HDT and Tg, 24 Hrs RT, 5 Hrs 80°C & 3 Hrs 120°C post-cure

Barcol Hardness	38
Heat Deflection Temperature (HDT)	109°C
Glass Transition Temperature (Tg) (DSC)	130°C
Ultimate Tensile Strength	67 MPa
Elongation at Break	2.4%
Tensile Modulus	3.5 GPa
Poisson's ratio	0.34

Typical Working Time to 4 poise: Crestapol® 1260

Time to 4 poise at 20C	15.5 minutes
Time to 4 poise at 25C	12.5 minutes

Typical Cure Speed: Crestapol® 1260

Gel time at 20°C (100g)	56 minutes
Gel time at 25°C (100g)	37 minutes

MECHANICAL PERFORMANCE

The table opposite presents a selection of typical mechanical test data obtained using Crestapol® 1260 and carbon fibre reinforcement fabrics utilising general purpose sized carbon fibres.

Mechanical Properties of Vacuum Infused Carbon Fibre Laminates with Crestapol® 1260†

Test method	23°C Ambient	Post-conditioned strength retention K
ILSS Strength		
0/90° Bi-axial Specimen	34 MPa	81%
UD Specimen	61 MPa	93%
Flexural Strength*		
0/90° Bi-axial Specimen	1032 MPa	82%
0° Compression Strength#		
UD Specimen	655 MPa	83%

Physical Properties

Water uptake after 28 days immersion at 40°C

0/90° Bi-axial Specimen	0.15% wt.
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Time required for 1mm laminate to reach Shore-D hardness of 80

BS EN ISO 14130

* BS EN ISO 14125

BS EN ISO 14126

‡ Room temperature process & 24 Hours room temperature + 3 Hours 80°C post cure

K Strength retention of carbon fibre laminates after 28 days exposure to 4 cycles of + 50 °C salt spray, - 20 °C freeze and + 60 °C dry conditions is typically 80 to 90%