CRESTAPOL® 1214

Low Profile, Fire Retardant Pultrusion Resin

Introduction
Crestapol 1214 is a tough, low viscosity resin with a rapid cure, which can be highly filled with selected grades of alumina trihydrate (ATH). A blend of ATH with this resin will give fire retardant performance. It is designed for use in pultrusion.

Formulation
This resin should be allowed to attain workshop temperature before use. It requires the addition of a catalyst to start the curing reaction. Conventional pultrusion system catalysts can be used.

The resin should be stirred well prior to use using a low shear mechanical stirrer.

Additives
Crestapol 1214 may be highly filled (in some cases up to 170 parts per resin) with a selected range of fillers. Users should seek advice from our Technical Services Department regarding any other additives. Different fillers can change the geltime characteristics and it is recommended that tests are carried out to assess performance.

Physical Data – Uncured
The following tables give typical properties of Crestapol 1214.

Property	Unit	Crestapol 1214
Appearance		Clear Yellowish Brown
Viscosity @ 25°C 4500 sec^{-1}	Poise	1.4
Density @ 25°C	gcm^{-3}	1.09
Volatile Content	%	44
Stability in The Dark @ 20°C	Months	>6

Physical Data – Cured

Property	Unit	Fully Cured* Resin
Geltime* (66°C to 88°C)	Minutes	16
Geltime* (66°C to Peak Exotherm)	Minutes	18
Peak Exotherm Temperature	°C	175
Flexural Modulus**	GPa	49.1
Flexural Strength**	MPa	1014
Flexural Extension To Break**	%	2.1

* SPI gel test at 82 °C, 2 % Perkadox CH50X
** Pultruded bar tested to BS78612-1:2007

Typical Formulation
The formulation outlined below is a typical pultrusion formulation. However, customers may prefer to use their own curing and release systems.

Component	Formulation	Comment
Crestapol 1214	100 pbw	
Alumina Trihydrate	100 - 200 pbw	A suitable grade of ATH used for pultrusion or equivalent with a medial particle size of 2 microns
Byk W996	3 -6 pbw	Available from Byk-Chemie GmbH
Trigonox C	1 pbw	Available from Akzo Nobel Chemicals
Perkadox 16	0.5 pbw	Can be pre-dispersed in MMA. Available from Akzo Nobel Chemical
PAT 654	1 -3 pbw	Available from E & P Wuertz & Co
Pigment (if required)	2 -5 pbw	Crystic pigment pastes are fully compatible
Die Temperature	140°C	1st section unheated to prevent gelation at die entrance
Start Up	0.2m / minute	

Storage
Crestapol 1214 should be stored in the dark in suitable closed containers. It is recommended that the storage temperature should be less than 20°C where practical, but should not be stored above 30°C. Ideally, containers should be opened immediately prior to use. Where they have to be stored outside, it is recommended that they be kept in a horizontal position to avoid the possible ingress of water.

Packaging
Crestapol 1214 can be supplied in 25Kg, 200Kg and 1 tonne containers.

Health & safety
Please see separate Materials Safety Data Sheet.

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