ULTRATEC™ NEUTRAL FR SPRAY GELCOAT

Technical Datasheet

PRODUCT CODE: C410005

ULTRATEC ™ FR GELCOAT is a specially formulated Fire Retardant Gelcoat for composite applications requiring reduced flammability. This gelcoat contains a non-halogenated fire-retardant system which forms a carbonaceous char on combustion. This surface layer helps to protect the underlying polymer structure from oxygen and radiant heat. Flammability characteristics of **ULTRATEC ™ FR GELCOAT** (White version – C410001), have been determined according to Australian Standard AS1530.3-1999. When tested according to this standard, zero flame spread ratings can be achieved for properly made, well cured composites faced with this Gelcoat. An M2F1 fire classification has also been demonstrated for **ULTRATEC ™ FR GELCOAT** (White version – C410001) when tested according to French Fire Standards: NF P92-507 and NF F16-101. This fire retardant gelcoat also shows excellent handling properties and good UV and weathering resistance. The Gelcoat has been designed for ambient temperature curing with MEKP initiators.

ULTRATEC ™ FR GELCOAT – Neutral is a non-pigmented version of this product, which is intended for tinting with approved pigments in a limited range of colours.

FEATURES

- Excellent atomization and general spraying characteristics
- Excellent flow/levelling properties
- Good sag resistance
- Highly resistant to triping/wrinkling
- Cured gelcoat shows reduced flammability and intumescent behavior
- Zero flame spread index when tested according to AS1530.3-1999
- French Fire Test classification according to NF P92-507:1994 and NF F16-101:1988

BENEFITS

- Easy to apply with industry standard spray equipment.
- Easy control of film thickness
- Provides a more consistent film thickness
- Increased tolerance to application variability
- Can be used in specialised fire retardant applications.
- Low flammability characteristics (White – C410001)
- M2 F1 (White – C410001)

ADDITIONAL INFORMATION

The flammability properties presented in the following table relate to the specific panel construction tested. The Gelcoat used in the test panel was C410001 – Ultratec ™ FR White.

This data is intended as a guideline to demonstrate flammability properties achievable with these Gelcoats. Fire retardant properties also depend on other factors including the degree of cure achieved in the composite (full post cure recommended), reinforcement types and content.

Flammability properties of any composite moulding constructed using Ultratec FR Gelcoats must be verified by independent testing."

RELATED PRODUDCTS

C410001 - Ultratec ™ FR White Gelcoat

RECOMMENDED CATALYST

2% Curox MEKP NR20 or 2% Norox MEKP 9

FIRE PROPERTIES

Ultratec ™ FR Gelcoat Tested: C410001 - White

AS1530.3-1999 Fire Test Properties :	Ignitability Index	14
	Spread of Flame Index	0
	Heat Evolved Index	2
	Smoke Developed Index	8
Application Guidelines	Temperature	15 - 30°C
	Catalyst –MEKP NR20 / Norox 9	1.5 – 2.5%
	Film thickness	25 – 35 thou
French Fire Test classification		M2 F1
Reaction to Fire (classification according to NF P92-507: 1994)		M2
Classification of smoke density and toxicity (classification according to NF F16-101:1988)		F1

Fire Test Reports available on request.

TEST PANEL CONSTRUCTION DETAILS (Composite)

Total Thickness	Approx 3 mm
Total Weight g/m^2	7.9 Kg
Gelcoat thickness	0.5 mm
Gelcoat Weight	1.0 kg
Laminate - Glass fibre content	2.3 kg
Laminate - Resin (Modar 816) content	4.6 kg

TYPICAL LIQUID RESIN PROPERTIES

PROPERTY	TYPICAL VALUE	TEST DETAILS
Appearance	Translucent Liquid	
Viscosity	14000-17000 cP (Summer) 12000-15000 cP (Winter) 260 - 310 cP	Brookfield RVF sp 4/4 rpm Cone and Plate
Gel time	11 – 14 minutes (Summer) 7 – 9 minutes (Winter)	2% v/w MEKP NR20
Shelf Life	3 months	When stored in original closed container in the shade

* Typical values: Based on materials tested in our laboratories, but varies from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specification items.

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TYPICAL CAST UNFILLED RESIN PROPERTIES

Fully Postcured

PROPERTY	TYPICAL VALUE	TEST DETAILS
Hardness	40	Barcol (GYZ 934-1) EN 59
Volume Shrinkage	7 – 8 %	ISO 3521
Heat Deflection	80 – 85 °C	ISO 175 (1.8 MPa)

STORAGE AND HANDLING

To ensure maximum stability and maintain optimum resin handling properties, polyester resins should be stored in closed containers, away from heat sources and sunlight. The resin should be stored away from all sources of ignition. Stored resin quantities should be kept to a reasonable minimum and used on a first in/first out stock rotation basis. Prolonged storage, or unfavourable storing conditions, may cause separation, therefore agitation of the resin before use is recommended.

STANDARD PACKAGING

Mild steel drums (225kg)
Mild steel pails (20kg)

Always refers to the MSDS before use