

## BÜFA®-Firestop 5001-T-1

Fire Retardant Base Resin

Prod. No. 788-5003

**Product description** BÜFA®-Firestop 5001-T-1 is a DCPD based, thixotropic, non-halogenated, non-pre-accelerated unsaturated polyester resin dilute in styrene and MMA monomer.

**Applications** BÜFA®-Firestop 5001-T-1 forms part of a filled fire retardant resin system suitable for use in hand lay-up, cold-press moulding, resin transfer moulding, centrifugal casting and pultrusion.

The system is highly fire retardant with low smoke emission. Finished parts have superior dimensional stability and electrical resistance properties. It is pigmentable in a full range of colours (including white & pastel shades).

### Specifications / technical data

Property	Test method	Value	Unit
Density at 23 °C	TM 2160	1,08	g/ml
Flash point	TM 2800	12	°C
Viscosity at 20 °C: ISO-Becher Ø 6 mm	DIN 53 211	59	s
Viscosity at 25 °C Brookfield RVT Spl 2. rpm 50.	ISO 2555	90 - 120	mPas
Appearance	TM 2265	slight hazy	
Stability at 120 °C	TM 2300C	> 75	min
Density at 25 °C, filled System	TM 2160	2,08	g/ml

### Curing

Reactivity:

Geltime at 25 °C im 100 g Becher:  
100 g BÜFA®-Firestop 5001-T-1 + 300 phr ATH  
+ 1 g OLDOPAL-Accelerator complex (742-5002) or BÜFA®-Firestop  
5002-M-2  
and 1,5 g Butanox M 50: 23 - 31 min

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## Mechanical Properties

## Mechanical, electrical and fire retardant properties

<u>Property*</u>	<u>Test method</u>	<u>Value</u>
Tensile strength	ISO 527-2	51,3 MPa
Tensile-E-Modulus	ISO 527-2	19,2 GPa
Elongation at break	ISO 527-2	0,45 %
Compressive strength	ISO 604	166,9
Compressive strength at 90 °C to plane of reinforcement	ISO 604	162,8
Hardness	Barcol	63
LOI (Limited Oxygen Index)		100 %
Temperature Index	BS 6853	365 °C
3m cube Test, A1 (on)	BS 6853	1,95
3m cube Test, A0 (off)	BS 6853	2,66
NBS-Smoke Chamber, max. specific optical Density, smouldering	BS 6401	45
NBS-Smoke Chamber, max. specific optical Density, flaming	BS 6401	32
Comparative tracking Index	BS 5901	600 V
Volume resistivity	BS 6233	2,0 e <sup>+14</sup>
Surface resistivity	BS 6233	8,6 e <sup>+13</sup>

\* Filled system to glass ratio 8:1 by weight, based on 300 phr of alumina trihydrate.

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**Colouring** Pigmentable in a full range of colours.

Properties of the cured base resin	Property*	Test method	Value
	Arc erosion	BS 4145	831 s

**Directions for use** Typical starting formulation for BÜFA®-Firestop 5001-T-1 filled system:

Components	Weight[g]
BÜFA®-Firestop 5001-T-1	100,00
BÜFA®-Firestop 5002-M-2 or OLDOPAL Accelerator complex 5002	2,00
Byk W 995	2,50
Martinal ON-921	300,00
Butanox M 50	2,00

Please add all components as listed and ensure the product is thoroughly stirred before use. Do not allow the Co-accelerators to come in direct contact with organic peroxides. A violent explosive reaction may ensue!!!

To gain highest fire retardant properties it is suggested to use the resin also as a gelcoat layer. Apply a thickness of 600-800 µm filled and coloured resin system and let it cure. After a period of time start with the laminate construction, preferable with an emulsion bonded fibre mat (300 g/m<sup>2</sup>).

**Note:** The thickness of the laminate and its entire construction, including any top coats, varnishes, applications, sandwich components, etc. also have a decisive influence on fire behaviour. Always remember that individual component tests are mandatory for most applications.

**Fire protection properties** Results of orientational tests:

NFP 92-501:	M 1
NFF 16-101:	F 0
DIN 4102:	B 1 (3-4 mm)

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BS 476 part 6 und 7: class 1/0

BS 6853: cat 1a

EN 13501: B, s1,d0

The laminates were produced under ideal, controlled, laboratory conditions. This information does not replace component tests by the manufacturer.

## Storage/Handling

This product must be stored cool in closed containers, protected from sunlight. Shelf-life is at least 6 months in unopened, original containers stored up to a temperature of 20 °C. Gel and curing times may change with increasing duration of storage.

**Former product name** Synolite 5001-T-1

Note: The Information given above is based on our current state of knowledge and experience. In view of the many factors that may influence working conditions and the application of our products, the user is not relieved from carrying out his own tests and experiments. No legally binding warranty of certain properties or suitability for a particular purpose can be derived from this information. It is the responsibility of the receiver or user of our products to observe proprietary rights as well as existing laws and regulations. The latest version of the corresponding EU Safety Data Sheet must also be observed.

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