

BÜFA®-Firestop 5001-T-1

Fire Protection Base Resin

Prod. No. 7165003

Product description BÜFA®-Firestop 5001-T-1 is a thixotropic, non-halogenated, unsaturated polyester resin on a DCPD base dissolved in MMA and styrene that has not been pre-accelerated.

Applications As a filled system, the resin is mainly intended for manual application (brush) but can - depending on the level of filling with ATH - also be used for liquid resin press moulding, RTM, casting and pultrusion applications.

The system is distinguished by very high fire protection properties with very little smoke density and toxicity. Finished components have very high dimensional stability and electrical resistance.

Specifications / technical data

Property	Test method	Value	Unit
Density at 23 °C	TM 2160	1,08	g/ml
Flash point	EN ISO 3679:2014 Verfahren B	19,5	°C
Flow Viscosity at 25 °C in an ISO-cup Ø 6 mm	DIN 53 211	59	s
Viscosity at 20 °C Brookfield RVTSpI 2. rpm 50.	ISO 2555	90 - 120	mPas
Appearance	TM 2265	slightly cloudy	
Stability at 120 °C	TM 2300C	> 75	min
Density at 25 °C, filled system	TM 2160	2,08	g/ml

Curing

Reactivity:
Gel time at 20 °C in a 100 g cup:
With 1 g BÜFA ACCELERATOR COMPLEX 5002 (715-9003)
and 1.5 g Butanox M 50: 23 – 31 min

BÜFA®-Firestop 5001-T-1

Fire Protection Base Resin

Prod. No. 7165003

Mechanical 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	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, burning	BS 6401	32
	Tracking resistance	BS 5901	600 V
	Volume resistance	BS 6233	2.0 e ⁺¹⁴
	Surface resistance	BS 6233	8.6 e ⁺¹³

* Filled system with a resin-glass ratio: 8:1, resin with 300 parts ATH.

Colouring

Tinting in different shades of colour is possible.

Properties of the cured base resin

<u>Property*</u>	<u>Test method</u>	<u>Value</u>
Burning resistance	BS 4145	831 s

BÜFA®-Firestop 5001-T-1

Fire Protection Base Resin

Prod. No. 7165003

Directions for use

Recommended formulation for a fire protection system based on BÜFA®-Firestop 5001-T-1 to meet the highest fire protection requirements:

Components	Weight [g]
BÜFA Firestop 5001-T-1	100.00
BÜFA Accelerator Complex 5002	1.00
Byk W 995	2.50
Martinal ON-921	300.00
Butanox M 50	2.00

The components above should be added to the resin in the order given and mixed by machine until homogenous.

The peroxide should only be added directly before processing begins!!!
Never allow direct contact between the accelerator and peroxide!!!

To achieve the highest fire protection requirements, it is recommended to use the resin as a gelcoat as well. An at least 600-800 µm thick layer of the filled, tinted resin system is applied to the mould and cured. Laminate construction then follows, preferably with an emulsion bound, random fibre mat (300 g/m²)

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.

BÜFA®-Firestop 5001-T-1

Fire Protection Base Resin

Prod. No. 7165003

Fire protection properties

The following orientating fire test results were achieved with a system consisting of BÜFA® Firestop 5001-T-1 with 300 parts ATH and a glass content of 10-14 % in a 4 mm laminate:

NFP 92 501:	M 1
NFF 16-101:	F 0
DIN 4102:	B 1 (3-4 mm)
BS 476, part 6 and 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.

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.

BÜFA Composite Systems GmbH & Co. KG
Hohe Looge 2-8
26180 Rastede
GERMANY
Phone +49 4402 975-0
Fax +49 4402 975-300
compositesystems@buefa.de
www.buefa.de
www.buefacompositesystems.com

A member of the BÜFA-Group