

BÜFA®-Firestop 5001-W-2

UP Fire Protection Resin

Prod. No. 716-5002

Product description

BÜFA®-Firestop 5001-W-2 is a pre-accelerated, thixotropic, moderately reactive, low viscosity laminating resin. It is made of unsaturated polyester resin dissolved in styrene and methyl methacrylate.

The resin is halogen-free and contains aluminium hydroxide as a flame retardant.

Applications

BÜFA®-Firestop 5001-W-2 is used for the production of moulded parts with fire protection properties and is mainly used in transport and boat construction areas as well as the building trade. BÜFA®-Firestop 5001-W-2 is distinguished by excellent resistance to fire and very low emission of smoke and toxic gasses

Specifications / technical data

Property	Test method	Value	Unit
Solid content	EN ISO 1172	77,5 - 81,5	%
Stability	TM 2300C	> 60	min
Viscosity at 23 °C Physica Z 2, 20 s-1	TM 2313	900 - 1200	mPas
Viscosity at 23 °C Physica Z 2, 50 s-1	TM 2313	620 - 780	mPas
Viscosity at 23 °C Physica Z 2, 250 s-1	TM 2313	420 - 480	mPas
Density at 23 °C	TM 2160	1620	kg/m ³

Curing

Reactivity:
BÜFA method in accordance with DIN 16 945 6.2.2.1
(100 g resin + 0.5 g DEAA Promotor (742-0090)
+ 2.5 g Butanox M-50)

25 - 35 °C	30 - 45 min
25 °C - Tmax	45 - 65 min
Tmax	55 - 70 °C

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Attention!

The information given above refers exclusively to the use of the catalyst named and the quantity specified. The use of different products or differing quantities may yield different results.

Mechanical Properties

To achieve the best mechanical and fire protection properties, conditioning for at least 4 hours at + 80 - 90 °C is recommended.

Properties of the cured base resin

<u>Property*</u>	<u>Test method</u>	<u>Value</u>
Heat distortion temperature (HDT)	ASTM D648B	> 90 °C

Directions for use

Due to the thixotropic stabilisation of the resin, there is practically no settling out of the filler. Long stirring procedures should be avoided; the resin should be gently stirred for a maximum of 0.5 h before using. "Gentle stirring" is understood as stirring at low speed, just setting material at the edge of the container in motion. Only a minimal "whirlpool" effect should take place at the centre of the container.

Before working in closed moulds, 1 - 2 % 742-0018 OLDOPAL Viscosity Reducer should be added to the resin to further optimise working consistence. Larger quantities should be avoided to maintain its fire protection properties. The addition of styrene or MMA to reduce viscosity should also be avoided.

When laminating with BÜFA®-Firestop 5001-W-2, the glass mat must be thoroughly and quickly impregnated to prevent fibres from standing and wrapping around the laminating roller. This can be achieved by:

- 1) Applying strong pressure on the roller when applying to force impregnation
- 2) Removing air from the glass/resin mixture by working over quickly and vigorously with a de-airing roller

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The best textile glass mat for this purpose is an open, emulsion bound mat which can be more quickly impregnated by the resin. To facilitate de-airing, the resin should be given sufficient time to impregnate the mat evenly and homogenously. Also make sure that the "bottom side" of the mat – this is the inside of the glass mat roll – is placed on the mould or gelcoat. Our Technical Service Department should be consulted before using rigid foams or other core materials.

Better full cure of the entire system is achieved by adding BÜFA®-DEAA-Promotor (742-0090). After the promotor has been added, the resin mixture is stable for max. 24 hours.

Note:

To achieve optimal mechanical and fire protection properties, the moulded parts should be post-cured for at least 8 hours at + 80 °C.

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

Orientalional test according IMO Res. MSC 61(67):

(Laminate construction 2 mm in combination with 300 g/m² Neogel Firestop 5005 (BÜFA Firestop S 250): 225 g/m² + 600 g/m² woven roving)

IMO Res.MSC 61(67) FTP Code Annex 1,part 2:
Smoke density, Dm < 200

IMO Res.MSC 61(67) FTP Code Annex 1,part 2:
Toxicity test, complies

IMO Res.MSC 61(67) FTP Code Annex 1,part 5:
Calorific power (according ISO 1716): 13 MJ/kg

IMO Res. A 653(16) FTP Code MSC 61(67) Annex 1, part 5:
Surface flammability:
CFE (KW/m²): 23,67
Q sb (MJ/m²): 2,83
Q t (MJ): 0,513

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q p (KW): 3,2

Further orientational test produced the following result:

(Laminate 3 mm with resin/glass ratio between 2,5 : 1 and 3,3 : 1)

TS EN 45545: HL 2

All 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 3 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.

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A company of BÜFA and DSM Composite Resins