BÜFA®-Firestop GC S 270-S/NV grey BF-70035-E

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BÜFA®-Firestop GC S 270 Gelcoats are flame-retardant, halogen-free products that are not pre-accelerated and are based on an unsaturated polyester resin dissolved in styrene. With a carefully selected combination of special flame retardant additives, this gelcoat achieves outstanding fire protection properties. This BÜFA® -Firestop Gelcoat is a product that reliably protects the UP resin behind laminates against flames.

Profile

Product family	BÜFA®-Firestop GC S 270
Product type	Gelcoat
Processing method	Spray quality
System	FIRESTOP
Pre-accelerated product	ATTENTION! This product is not pre-accelerated!
Resin base	Vinyl ester (VE)
Production method	Batch manufacturing
Colour	grey
BF-Number	BF-70035-E
Odour	characteristic

Application Range

BÜFA®-Firestop GC S 270 Gelcoats are suitable for moulded parts for internal and external use that are exposed to high stress, e.g. cladding panels, fire safety, laboratory and ship's doors, railway vehicles, wagon construction, etc. Other objects will require individual clarification in advance. We recommend consulting our Application department to determine a suitable protective coating.

Specification / Technical Data

Density (BM D01) approx.	1,33 g/mL

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Flashpoint (BPV FP 02) approx.	30°C
Styrene content approx.	7,60 %
Viscosity (BM V01) **Viscosity at 20 °C with spindle 5 and 5 rpm**	25,000 - 32,000 mPas

The BÜFA testing standards define the testing scenario after the values are determined in our facilities. They relate to generally accepted standards and are available under request.

Curing

CAUTION! Peroxides must never be brought into direct contact with accelerators (risk of explosion)! With regard to the resin base used here, it is essential to ensure that the reactants are precisely dosed and homogeneously mixed. Under all circumstances, it must be ensured that the hardener and accelerator are stirred separately.
The containers must be shaken or stirred before removing the accelerator, as components may settle after a longer rest period.
Mix the accelerator with the resin thoroughly first and only then add peroxide!

Reactivity	BM R01
Sample size	100g sample
Accelerator addition	1.0 wt.% 742-1399
Peroxide addition	Curox M-102 2.0 wt%
Geltime (Reactivity 20-30°C)	9 - 15 min
Curing time (Reactivity 20°C-Tmax)	22 - 27 min
T-Max (Reactivity Tmax at 20°C)	100 - 112 °C

ATTENTION! The above data refer exclusively to the use of the reactants mentioned here in the specified dosage. When using other products and also with deviating dosage, the results may be different.

The required final properties of BÜFA®-Firestop Gelcoats are achieved only with the use of the recommended quantity of BÜFA®- Accelerator Complex 0399.
The accelerator dosing of 1.5 vol.% must be kept constant at all times.

The inspection and assurance of the product quality (goods which meet the specifications) take place within the framework of quality control immediately after the product has been manufactured.

BÜFA®-Firestop GC S 270-S/NV grey BF-70035-E can be cured with the commercially available ketone peroxides.

In order to achieve the optimum mechanical and fire protection properties, the moulded parts are to be post-cured for at least 6 hours at + 80°C. This achieves the optimal gelcoat properties.

Processing

So far, the BÜFA release agent system Chemlease 2196 W has been tested and used successfully for this gelcoat. Other release agents should first be tested for their usability under practical conditions.
Optimal results are achieved by following the instructions below: The wet film thickness of the product in liquid state should be between 800 - 1000 µm and should not be less than a layer of 800 µm when wet.
After approx. 60 minutes, you can laminate with a perfect bond. In order to guarantee a perfect bond, the laminating work must be carried out no later than 4 hours later. If the gelcoat is applied after a waiting time >4 h, the user bears full responsibility and should test this in advance.
This gelcoat can be processed with appropriate application systems from the BÜFA®-Tec range. ATTENTION! Use only dried and de-oiled compressed air!
For processing and curing, the instructions in our “Working with BÜFA®-Gelcoats” technical information leaflet

must also be observed.

Fire Retardant properties

The thickness of the laminate and its overall structure - including any top layers, coatings, applications, sandwich inserts, etc. - also have a decisive influence on the fire behavior. The high level of fire protection may result in lower gloss levels and surface quality. The thickness of the laminate and the overall structure of the component - including any top layers, coatings, applications, sandwich inserts, etc. - also have a decisive influence on the fire behavior. It is important to note that individual component tests are prescribed for most applications and are the responsibility of the manufacturer.
We generally recommend combining BÜFA®-Firestop Gelcoats with our BÜFA®-Firestop resins in order to make optimum use of the synergies between the matching products.

Orientation for fire testing

• DIN 5510 - S4 / SR2 / ST2 (Gelcoat layer thickness 500 µm wet) with a 4 mm thick fibreglass laminate (resin: BÜFA®-Firestop 8175-W-1) with 40 wt.% glass content.

• EN 45545 - HL 2 (Gelcoat layer thickness 800 µm wet) with a 4 mm thick fibreglass laminate (resin: BÜFA®-Firestop S 570) with 30 wt.% glass content.

The laminates have been produced under ideal, controlled laboratory conditions and subjected to indicative testing. This information does not replace component testing by the manufacturer.

Colouring

BÜFA®-Firestop Gelcoats can only be pigmented to a limited range due to their fire retardant properties.
BÜFA®-Firestop GC S 270 Gelcoats have a standard color shade setting adjusted using BÜFA®-Accelerator Complex 0399. The use of other accelerators may result in color shade changes. To achieve the good fire protection properties, a high level of fire retardant is required, which makes color shade stability impossible. The gelcoat tends to change color within a short time, which generally requires painting for visible surfaces.
For an optimal coating of the BÜFA®-Firestop Gelcoat we have made the experience that ideally the gelcoat is sealed with a solvent-based EP-primer. The EP-Primer prevents the direct contact of water on the gelcoat surface.

Other information

The gelcoat should be stirred gently before processing.
It is essential to take into account that for most applications individual component tests are prescribed and these are the responsibility of the manufacturer.
The finished gelcoated component must not be exposed to direct weathering at any time (max. storage under a roof). The component must be dried again before painting.

Storage and handling

As a result of the wide range of factors which may influence the operating conditions and the application of the product, the user must still carry out their own tests and trials.
The product must be stored closed, in a cool, dry place and protected from sunlight.
In unopened, original containers, the product can be processed for at least 3 months if properly stored at up to 20 °C.
Higher temperatures reduce storage life.

The setting and curing times as well as the viscosities may vary with longer storage periods.

The above details have been compiled to the best of our knowledge and are based on our current knowledge and experience. These details only constitute product descriptions. Under no circumstances do they constitute guarantees relating to quality or durability. The processor is obliged to carry out their own tests and investigations in order to take responsibility for any processing and application of our products in the processor's application area. The latest version of the corresponding EU safety data sheet must also be observed.