

Technical document: TD-002, English translation

FIRESTOP Wood Technical Specification

I FIRESTOP Fire-protection System

1.1. General information

FIRESTOP Wood is a modern expanding (intumescent) coating aimed for the protection of interior wood. If fire occurs, intumescent coating prevents the effects of fire and insulates constructions protecting it over a certain period of time. FIRESTOP Wood intumescent coating has been tested and approved by certified institutes. The copy of certification document is issued to the customers as a part of Technical documentation. For additional data consult General product info, available on request.

1.2. Definitions of terms in this document

Producer – FIRESTOP Internacional d.o.o. (data in section VIII),
Customer (buyer or investor) – one who purchased and used product,
Fireproof coating – FIRESTOP Wood produced by mentioned producer,
TD – stands for this document.

1.3. FIRESTOP system consists of:

**Base coating - primer,
Interlayer - expanding coating,
Top layer - decorative coating.**

1.4. Base coating - primer

The use of primer is not always obligatory in FIRESTOP system. Priming is recommended for the preparation and additional impregnation of wood, reduction of intumescent coatings consumption or in the case of high aesthetic requirements and for covering of small irregularities on wooden surfaces, as a base for the expanding FIRESTOP Wood coating. FIRESTOP Wood expanding coating should be applied onto a compatible base coating. We recommend:

PRIMTEC Wood, acrylic primer

but other compatible primers are also acceptable.

The fireproof coating may be applied onto them after drying (usually after 24 hours).

If the wood is already coated with other primer or top coating, contact FIRESTOP Internacional technical service for advice prior to application of FIRESTOP Wood coating. Surface preparation should be in accordance with the instructions for the application of the selected base coating – primer.

General conditions for application and required thickness are in technical specifications for these products.

1.5. Interlayer expanding fire-protection coating

Generic type: FIRESTOP Wood is an expanding (intumescent) water-soluble coating intended for fire protection of wood and wooden structures (wooden beams, columns etc.).

Description: FIRESTOP Wood is an expanding coating forming a thin white film, containing materials which, at relatively low temperatures (180 - 220°C), usually as a consequence of fire, chemically react and release gases causing the coating to expand. The expanded material serves as insulator and protects wooden construction profiles onto which it is applied for a certain period of time. FIRESTOP Wood is a fireproof coating protecting wood and wooden structures from fire in time intervals of 30, 60 and 90 minutes.

Properties:

- * Water-based – may be used in residential buildings or places where thinner vapors may be hazardous. It is free of halogen elements.
- * Simple application: without thinner and dissolving, the coating is applied directly from the package.
- * High fire resistance with thinner film.
- * Excellent adhesiveness.
- * The coating provides a film of great hardness.
- * Application by spraying, with airless spray-pump or by brush, at the construction site or elsewhere prior to wooden structure erection or on assembled construction.
- * Simple and quick repair of damaged layers of the coating that occurred during structure installation.
- * Long life in exploitation.

1.6. Top coats:

Once FIRESTOP Wood expanding coating is applied in the recommended DFT (dry film thickness) and when it is completely dry, a top coat may be applied onto it. The top coat has a dual function in the system. It makes protected elements decorative and protects fireproof coating from humidity and atmospheric impacts. The colour is optional and its shades are in accordance with RAL.

Top coat is not always obligatory in FIRESTOP system. Top coat is recommended in cases of high humidity and other damaging effects on wooden constructions, because it prolongs fire protection durability. If top coat is only matter of decoration because the colour of FIRESTOP Wood is white, investor chooses its colour. In any case, top coating protects fireproof coating.

We recommend:

CENTURION B100, alkyd top coat

produced in RAL color chart shades. Also other compatible top coats can be used.

General conditions for application and required thicknesses are in technical specifications for these products. Test results and additional data are available on written request.

II Physical and Chemical Data (Typical Values)

2.1. Details

Technical properties:

No.	Description	Recommended value
1.	Colour	White, matte
2.	PH value	8.00 - 9.00
3.	Viscosity	12000 - 25000 mPa*s, R6/20rpm
4.	Solid matter content	70% (+/- 2%)
5.	Density	1.25 - 1.40 g/cm ²
6.	Solubility	Water-soluble
7.	Drying time*	2 - 3 hours at 21°C
8.	VOC content	<20 g/l

*Drying time could be modified due to several factors (temperature, humidity and air circulation, film thickness etc). For more information, see Application Manual (Technical document TD-005).

Table of gases (due to combustion of intumescent coating)

No.	Description	Chemical symbol
1.	Carbon monoxide	CO
2.	Carbon dioxide	CO ₂

3.	Ammonia	NH ₃
4.	Nitrogen	N ₂
5.	Water vapour	H ₂ O

2.2. Consumption

This information refers to assumed and practical consumption. Assumed consumption of the product is conditioned by required film thickness for certain fire protection period. Practical consumption of the product is conditioned by many factors which are monitored by customers (details in section 8.3. of Technical document TD-005).

III Approvals/Attestations

FIRESTOP Wood is tested and attested at the:

- IMS Institute Belgrade, Serbia to 30, 60 and 90 minutes of fire protection.

Test results and additional data are available on written request as a part of Technical documents (Test report, Certificate, Attest) which can be followed by Control conformity report if it is made or other additional documents.

IV Packing, Handling and Storage

Packing:	Plastic packaging, 22 net, or on request.
Storage:	Keep in the original closed packing. Keep indoors in a dry place. Keep from freezing. Storage temperature: 5°C-35°C.
Product life:	18 months, if stored in recommended storage conditions and in the original packing.

V Transport and Regulatory Information

ADR/RID/IMDG/IATA:	No restrictions
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Labels and Safety: Product is not classified in accordance with GHS/ CLP directives. Precautionary Statements are listed in Safety Data Sheet.

VI Conclusion

6.1. Producer liability

Producer is liable for claim that its product is fireproof in accordance with test results performed by certified institutes and published in Technical documents. This means that fire resistance is tested in accordance with valid Serbian and EN standards, as presented in Test report. To our best knowledge, technical data contained herein (and in our other technical documents, internal standards and recommendations) are true and accurate and they can be checked only according to methods mentioned in these documents. No other warranty and liability are implied. **The list of technical document is given in every our Offer to the customer. If not, customer should request these documents before accepting the Offer. In every case it is considered that customer is familiar with documents and producer liability is excluded.** Additional instructions are available on reasonable request.

Customer - user of product should contact FIRESTOP Internacional to check for data accuracy in this document before giving specification or order. We assume no liability for execution of works, application conditions, protection of coated elements from atmospheric conditions or damages inflicted due to mechanical or other effects, safety regulation on worksite, etc. except in special cases defined in special contract.

Our liability, if any, is limited to the substitution of products with other delivery.

6.2. Trademark

FIRESTOP Wood is a trademark of our company, legally protected in Serbian Intellectual Property Office. It is within a proprietary program: FIRESTOP – expanding fireproof coatings – state of the art protection of steel and wooden structures: registration No. 4117, report No. A-727/08/01 and registered trademark (signet) No. 57833.

VII Date of Issue of this TD

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(Basic document)

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VIII Signature



FIRESTOP Internacional d.o.o.

22330 Nova Pazova

G. Principa 20

MBR: 20921331

Tel: +381 22 321 030, +381 22 326 342

Fax: +381 22 325 002

support@internacional.rs

www.firestopinternacional.com

