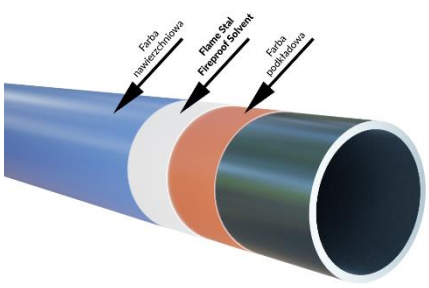
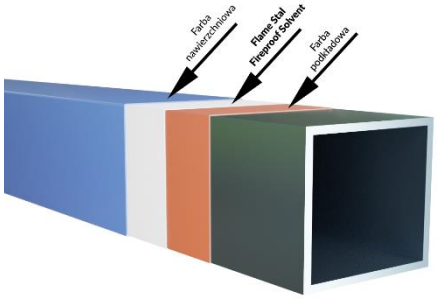
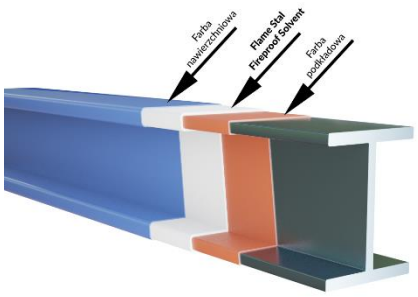
INTUMESCENT COATING FOR FIRE PROTECTION:
STEEL STRUCTURES

PRODUCT OFFICIAL DOCUMENTS	
European Technical Approval:	ETA-20/0957
Certificate of Constancy of Performance:	FIRES-1396-CPR-0199
Declaration of Performance:	FS-013-1-2023-06-02
Hygienic certificate:	B-BK-60211-0096/21

PRODUCT TECHNICAL DATA	
Fire resistance class:	from R15 to R60
Color:	creamy
Density:	1,42±5%
Solids content %:	81±3
Surface drying time:	30±10 minutes
VOC (g/dm³):	23,45±1,8
Storage temperature range:	from +5°C to +35°C
Packaging:	20l bucket







TECHNICAL DESCRIPTION:

Flame Stal® FireProof Solvent is a fireproof intumescent coating. One-component, thixotropic mixture based on organic solvents. Under the influence of high temperatures, **Flame Stal® FireProof Solvent** foams, creating a durable thermal insulation, delaying the temperature increase of the steel substrate. **Flame Stal® FireProof Solvent** is a fireproof intumescent coating intended for fire protection of steel and galvanized steel structures, made of open and closed profiles, in classes from R-15 to R-60 against thermal impact of standard fires according to PN-EN 1363-1: 2012. **Flame Stal® FireProof Solvent** coating has the Technical Approval ETA-20/0957 and the certificate of compliance FIRES-1396-CPR-0199. Fire-protected elements can be used inside and outside buildings under the influence of environmental factors Z1, Z2, X, Y and various environmental corrosivity categories from C1 to C5.

INTENDED USE:

Flame Stal® FireProof Solvent is applied to surfaces previously protected against corrosion with a primer paint or to prepared galvanized surfaces. The **Flame Stal® FireProof Solvent** fire protection system creates a flexible and mechanically durable protection, resistant to moisture, condensation water and weather conditions, including industrial atmosphere. As an intumescent layer in sets with appropriate undercoat and topcoat paints, it is used for fireproof protection of steel structures with open and closed profiles working outside or inside objects, including galvanized surfaces. Before using the system, consult the technical advisor of the paint manufacturer or distributor. Fire protection may be performed only by trained companies that have received or have a valid **Flame Stal® FireProof Solvent** Contractor's License. **The product is intended for professional use.**

ADVANTAGES

- Quick drying, allows for quick and planned completion of works
- Excellent application properties and aesthetic appearance of the coating, does not drip
- Smooth coating
- For indoor and outdoor use
- Can be used in an environment with a corrosivity class up to C5
- The coating is easy to apply using methods available at the production plant and on the construction site
- A large selection of primers and topcoats with unlimited colors

PREPARATION OF STEEL SUBSTRATE

Before coating with the primer, clean the surface with the abrasive blast cleaning method to the degree of cleanliness of Sa 2.5 or Sa 2 according to PN - ISO 8501-1: 2008 or equivalent. Ry5 surface roughness within 40-60 µm visual inspection. Galvanized steel substrates should be protected with an appropriate sealant coating. Before using **Flame Stal® FireProof Solvent** intumescent coating, the surface of the undercoat should be dry, free of dust, grease and other contaminants.

APPLICATION

We recommend airless spray and a brush or a roller.

NOTE:

- **Flame Stal® FireProof Solvent** is a quick-drying coating containing fillers that allow for wet application of very thick layers
- It is not recommended to use over 1 mm when wet, as in some cases it may cause coating defects and extend the time curing
- For airless application of thin layers (minimum thicknesses up to 0.85 mm wet), they must be applied once!
- It is recommended to apply topcoats immediately after **Flame Stal® FireProof Solvent** coating cures - that is, within 12 to 48 hours from the measurement of the thickness of **Flame Stal® FireProof Solvent**. The time depends on the thickness of the intumescent layer and the ambient temperature
- Intumescent coating immediately after application is sensitive to stagnant water, rainfall and condensation, therefore it cannot be exposed to this type of action. On warm, windy days, short showers are not harmful. Rain covers should be provided for coating in the rainy months
- When using matt and semi-matt topcoats or dark colored topcoats, the minimum thickness of the topcoat should be 0.12 mm
- Depending on the corrosivity category of the environment from C4 to C5, use a topcoat with a thickness of at least 0.12 mm (after drying)

HYDRODYNAMIC SPRAY PARAMETERS

- Pressure ratio at least 38: 1, optimally 60: 1
- Nozzle diameter from 0.017 to 0.023
- The spray angle depends on the type of coated structure from 20 to 50
- 3/8 "spray line, cable end to the gun, approx. 2 meters ¼"

COATING PREPARATION

The coating is ready to use. Before use, the coating should be stirred thoroughly for a period of at least 3 minutes. If additional dilution is necessary, use - Thinner Piroixonol PT. Maximum thinner addition 3-5% vol. Maintenance and cleaning of equipment - thinner Piroixonol PT.

RECOATING TIMES

Recoating times stated in the technical data sheets for each of the system components must be adhered to.

The minimum time to apply the next layer of Flame Stal Fireproof Solvent:

Coating thickness	Temperature [°C]	Recoating time [h]
0,5 mm	10	6
1 mm	10	16
0,5 mm	20	3
1 mm	20	8

*the above times are those obtained under laboratory conditions and may differ

Minimum time to apply the first coat of topcoat:

Coating thickness	Temperature [°C]	Recoating time [h]
0,5 mm	10	16
1 mm	10	48
0,5 mm	20	12
1 mm	20	36

* the above times are those obtained under laboratory conditions and may differ

CONDITIONS DURING COATING WORKS

Works should be performed on clear days (no rain, fog, frost, etc.). Use covers for other conditions.

- The intumescent coating layer should be applied at a temperature not lower than + 5 ° C
- The surface temperature must be at least 3°C above the dew point
- Maximum relative air humidity 80%

The next layer of coating may be applied after the previous layer has dried.

STORAGE

In closed containers away from fire and heat sources. Minimum storage temperature + 3 ° C
Do not leave the barrels in places with the temperature above 35°C

CAUTION

Before coating, read and follow the recommendations contained in this product technical sheet and in the Coating Technical Sheet.
In case of doubt or if you need additional information, please contact the manufacturer's representative or distributor.

Health and safety recommendations:
The product is intended for use by professional companies in industrial conditions. Work related to the installation of the product should be carried out in accordance with the applicable health and safety and environmental protection regulations. Before starting work with the product, read the Product Safety Data Sheet.

Version 05.2022 replaces 04.2021
The above information is based on our current knowledge and experience. We provide them in good faith. However, due to the variety of methods and conditions of application, they should be verified in specific applications. Therefore, the manufacturer's liability and obligations beyond the conditions set out in the applicable standard are excluded.