

DECLARATION OF PERFORMANCE

No. DoP FS-013-1-2023-06-02

1. Unique identification code of the product type:
Flame Stal FireProof Solvent
2. Intended use:
Flame Stal® FireProof Solvent is used in conjunction with the coatings listed below. It is to reinstate the fire protection of steel and galvanized steel structures in order to change the fire resistance of the structure. The product manufactured using painting techniques, after hardening, provides protection against fire and long-term resistance to the impact of environmental factors (Z1, Z2, Y, X) or the impact of corrosive conditions, in accordance with ETA-20/0957.

Flame Stal® FireProof Solvent is intended for fire protection of various sizes of open profiles (e.g. Type I, H), rectangular and round beams/rectangular columns up to fire resistance class R60-IncSlow and for design temperatures from 450°C to 650°C, and for critical temperatures from 496 ° C to 620 ° C based on EN 1993-1-2: 2005 / AC: 2009, which means utilization factor μ_0 0.8 ÷ 0.4.

Flame Stal® FireProof Solvent has been tested as compatible with the following primers:

Type	Description
General primer paint	two-component epoxy
General primer paint	Two-component zinc-rich epoxy
General primer paint	two-component zinc-rich epoxy (metallic zinc powder)
General primer paint	galvanized steel / two-component epoxy bond coat

Permissible thickness of primers

Primer	Permissible thickness range [µm]	
	minimum	maximum
two-component epoxy	60	120
Two-component zinc-rich epoxy	60	120
two-component zinc-rich epoxy (metallic powder zinc)	60	120
galvanized steel / two-part epoxy bond coat (bond layer thickness only)	60	150

Where the theoretical minimum dry film thickness permitted is less than the typical minimum dry film thickness recommended by the manufacturer, the practical information given in the product data sheet should be followed. In addition, the dry film thickness of the primer must not exceed the maximum dry film thickness for the product, as recommended by the manufacturer.

Flame Stal® FireProof Solvent has been assessed as compatible with the following topcoats:

Coating	Description	Type
Carbothane 134 PU	two-component aliphatic acrylic polyurethane	Specific topcoat

Karbopur	two-component polyurethane	Specific topcoat
Temathane 50	two-component aliphatic isocyanate polyurethane	Specific topcoat
Purmal S	two-component polyurethane	Specific topcoat
Polyfinish MUDL	two-component aliphatic isocyanate polyurethane	Specific topcoat
Remoplast UVC HS ES	two-component aliphatic isocyanate polyurethane	Specific topcoat
Hempathane 55210	two-component aliphatic isocyanate polyurethane	Specific topcoat
Teknodur 70 5-00	two-component aliphatic isocyanate polyurethane	Specific topcoat
Dualcotex M.S. M30	two-component aliphatic acrylic polyurethane isocyanate	Specific topcoat
Telpur T320	two-component aliphatic acrylic polyurethane isocyanate	Specific topcoat
Two-component polyurethane enamel	two-component polyurethane	Specific topcoat
PROTECT.SC PU/M 30-40	two-component polyurethane	Specific topcoat

In dry, closed rooms with environmental class (Z1 and Z2), Flame Stal® FireProof Solvent can be used with another topcoat from the group of polyurethane or polyvinyl paints with a coating thickness not exceeding the maximum thickness of the topcoat. The maximum allowable CSB value (gross heat of combustion) of other paint coatings determined in accordance with EN ISO 1716: 2018 is 30,864 MJ/kg.

3. Manufacturer:
Pirosystem Sp. z o.o.
Ogrodnicza 3A
83-021 Wiślina, Poland
4. Authorized representative:
N/A
5. Systems for assessing and verifying constancy of performance:
Flame Stal® FireProof Solvent – System 1
6. European Assessment Document:
European Assessment Document (EAD) EAD 350402-00-1106,
September 2017 FIRE PROTECTIVE PRODUCTS REACTIVE
COATINGS FOR FIRE PROTECTION OF STEEL ELEMENTS
 European Technical Assessment:
ETA-20/0957 issued on 22/03/2021
 Technical Assessment Unit:
FIRES, s.r.o., Osloboditeľov 282, 059 35 Batizovce, Slovak Republic
 Notified body or bodies:
Notified certification body no. 1396

7. Declared performance properties:

Essential characteristics	OWSWU System	Performance properties	Harmonized technical specification
Mechanical and static resistance (BWR1)			Not applicable
Fire safety (BWR2)	1	According to EN 13501-1: 2018	EAD 350402-00-1106 September 2017
Reaction to fire	1	Class B-s1,d0	EAD 350402-00-1106, September 2017
Fire resistance	1	ETA-20/0957 issued on 22/03/2021 Annex A	EAD 350402-00-1106, September 2017
Hygiene, health and environment (BWR3), Content, emission and/or release of hazardous substances	1	$R = \sum C1 / LC11 - 0,72 \mu\text{g.m}^3$ after 28 days (+28 days of pre- conditioning)	EAD 350402-00-1106, September 2017
Identified planned product release scenarios and intended use in relation to substances hazardous to the product: IA1: Product in direct contact with indoor air. IA2: Product in indirect contact with indoor air (e.g. coated products), but possible impact on indoor air. S/W2: Product in indirect contact with soil, groundwater and surface water.		according to EN 16515	
Air permeability		NPD (not specified)	
Water permeability		NPD (not specified)	
Release of hazardous substances		NPD (not specified)	
Safety of use and accessibility of facilities (BWR 4)			
Mechanical strength and stability		NPD (not specified)	
Impact and movement resistant		NPD (not specified)	
Adhesion			
Basic durability rating		according to 2.2.4 in EAD 350402-00-1106	
	1	Compatibility with primer and coating surface (see ETA-20/0957 issued on 22/03/2021) - Type X durability - Durability Type Y - Durability Type Z1 - Durability Type Z2 according to 2.2.5.1 in EAD 350402-00- 1106 - C3 med, 120h Water condensation - C3 med, 120h Salt chamber test - C4 med, 240h Water condensation - C4 med, 240h Salt chamber test - C5 med, 480h Water condensation - C5 med, 720h Salt chamber test	EAD 350454-00-1104 September 2017
Noise protection (BWR5)		NPD (not specified)	
Air acoustic insulation		NPD (not specified)	
Energy saving and thermal insulation (BWR6)			
Thermal conductivity		NPD (not specified)	
Water vapor permeability		NPD (not specified)	

The performance properties of the product specified above are consistent with the set of declared performance properties. This declaration of performance is issued in accordance with Regulation (EU) No 305/2011 under the sole responsibility of the manufacturer identified above.

Signed on behalf of the manufacturer
name and surname

Wiślina, 18 September 2023

Prezes Zarządu
Marek Gieraj

signature