

Fontefire ST 60-1

DESCRIPTION

A water-borne, thin film intumescent coating for efficient protection against cellulosic fires. When subjected to heat it expands and forms an insulating layer of foam.

PRODUCT FEATURES AND RECOMMENDED USES

- Due to highly competitive loadings, reduces paint consumption thus saving costs and throughput time. In addition to that, lower loadings enable faster overcoating of painted sections. Fontefire ST 60-1 provides efficient fire protection for constructional steelwork up to class R120 in the fire resistance classification.
- As a one-component product easy to apply on site. The sagging value is very good and the paint can be applied to a smooth matt finish. The CE-marked Fontefire ST 60-1 is compatible with a wide range of primers and topcoats. The product is tested and approved in accordance with ETA.
- Can be used in semi-exposed conditions (Type Y, EAD 350402-00-1106) without any topcoat. The paint is certified for 'H' or 'I' shaped beam and column sections as well as rectangular/circular hollow columns and rectangular hollow beams.
- Has extremely low volatile emission compounds thus resulting in a safer working environment while meeting the most stringent environmental demands.
- Recommended to be applied on-site during dry conditions. Components painted in workshops must be topcoated and properly dried before taken outdoors.



TECHNICAL DATA

Volume solids 69±3%

Weight solids 70±3%

Specific gravity 1.38 ± 0.02 kg / l

Recommended film thicknesses and theoretical coverage

Examples of recommended film thicknesses		Amount	Theoretical coverage	
wet mm	dry mm	g/m ²	l/m ²	m ² /l
0.40	0.25	550	0.4	2.8
0.70	0.50	970	0.7	1.4
1.10	0.75	1520	1.1	0.9

Maximum wet film thickness of 1.2 mm can be achieved in a single spray coat by applying few quick passes. Maximum film thickness will depend on application conditions.

Practical coverage depends on the application method, painting conditions and the shape and roughness of the surface to be coated.

Drying time

DFT 500µm	+10°C, RH 50%	+20°C, RH 50%	+30°C, RH 50%
Recoatable, after	By itself 4h	By itself 3h	By itself 2h
Recoatable, after	With topcoat 16h	With topcoat 16h	With topcoat 16h

Drying and recoating times are related to the film thickness, temperature, the relative humidity of the air and ventilation.

Water-borne paints and coatings are sensitive to moisture and cold before they are completely dry. Painted surfaces must be stored indoors at a temperature of min. +10°C for at least 40 hours before taking into service. Forced drying may shorten the time. Please consult Tikkurila Technical Service for more information.



Fontefire ST 60-1

Gloss	Matt.
Color shades	White.

Fontefire ST 60-1

APPLICATION INSTRUCTIONS

Surface preparation	Primed surfaces: Oil, grease, salt and dirt are removed from the surface by appropriate means. Repair any damage to the primer coat. Note the overcoating time of primer. (ISO 12944-4) Note: An approved intumescent coating system always requires a primer coat.
Recommended primers	Fontecryl AP (40 µm), Fontecryl SC-MR 10 (40 µm), Temaprime EUR (40 µm), Temacoat GPL-S Primer (60 µm), Temacoat Primer (60 µm), Temacoat HS-F Primer (80 µm). The usage of other primers needs to be confirmed by Tikkurila/PPG responsible representative separately.
Recommended topcoats	Fontecryl SC 50, Temadur 50. and Temalac FD 50 about 50–60 µm
Application conditions	All surfaces must be clean, dry and free from contamination. The temperature of the ambient air, surface and paint should not fall below +10°C during application and drying. Relative humidity of the air should not exceed 70% during application and drying. The surface temperature of the steel should remain at least 3°C above the dew point. Good ventilation and sufficient air movement is required in confined areas during application and drying.
Application	Application by brush, roller or airless spray. Mix the paint thoroughly before use. Heavy stirring/mixing should be avoided. Recommended dry film thickness is approximately 500 µm/layer. Diameter of the paint hoses should be at least 10mm, the length should not exceed 60m. Nozzle tip size 0.017"–0.021", turnable nozzle is recommended. Nozzle pressure 175–210 kg/cm ² . Spray angle shall be chosen according to the shape of the object. Application with roller and brush is typically 600 µm WFT (420 µm DFT) per coat.
Control of film thickness	Before overcoating should the dry film thickness of the coating be controlled with a reliable test method in accordance with ISO 19840 and a record should be drawn.
Packing and touch-up of damages	Components painted in work shop should be covered with a plastic film during transport and storage and packed in order to avoid impresses. During winter season components should be dried 48 hours in room temperature before taken outdoors. Damages shall be repaired immediately in the same way as originally.
Thinners	Water
Cleaning of equipment	Water
Storage	9 months in dry and cool conditions.
VOC	The Volatile Organic Compounds amount to 0.5 g/litre of paint. VOC 2004/42/EC (cat A/i) 140 g/l (2010)
HEALTH AND SAFETY	Containers are provided with safety labels, which should be observed. Further information about hazardous influences and protection are detailed in individual health and safety data sheets. A health and safety data sheet is available on request from Tikkurila Oyj.

For industrial and professional use only.



Fontefire ST 60-1

The above information is not intended to be exhaustive or complete. The information is based on laboratory tests and practical experience, and it is given to the best of our knowledge. The quality of the product is ensured by our operational system, based on the requirements of ISO 9001 and ISO 14001. As manufacturer we cannot control the conditions under which the product is being used or the many factors that have an effect on the use and application of the product. We disclaim liability for any damages caused by using the product against our instructions or for inappropriate purposes. We reserve the right to change the given information unilaterally without notice.

The product is intended for professional use only and shall only be used by professionals who have sufficient knowledge and expertise on the proper use of the product. The information above is advisory only. To the extent permitted by applicable law, we shall not approve of any liability for the conditions under which the product is being used or for the use or application of the product.

In case you intend to use the product for any other purpose than that recommended in this document without first getting our written confirmation on the suitability for the intended use, such use takes place at your own risk.

Fontefire ST 60-1

EN 13381-8



Tikkurila Oyj, P.O.Box 53, FI-01301 Vantaa, Finland
2812
2812-CPR-GA5047
TIK-A045-2019

EN 13381-8 2013
ETA 20/1219
EAD 350402-001106

Reactive coating for the fire protection of structural steel, 'H' or 'I' beams and columns and rectangular and circular hollow section columns for up to a fire resistance classification of R90 and for rectangular/square hollow beams for up to fire resistance classification R120 for design temperatures in the range of 350°C to 750°C.

Essential Characteristic	Performance
Safety in Case of Fire	
Reaction to fire	Class E
Resistance to fire	Resistance to fire performance & field of application in accordance with EN13051-2 R120, See ETA 20/1219 -Annex A
Hygiene, Health and Environment	
Dangerous Substances	Does not contain dangerous substances See ETA 20/1219 Clause 3
Energy, Economy and Heat Retention	
Service & Durability	Compatible with generic primer types: 1 pack solvent based alkyd 1 pack water based acrylic 2 pack solvent based epoxy Internal Conditions Z1, Z2 (with or without topcoat) Semi-exposed conditions Y (without topcoat) Compatible with a range of topcoats. See ETA 20/1219 clause 3
Other	Not applicable/No performance determined