

STABITERM-217

Water-based fire protection coating for structural steel
Technical requirements TU 2316-001-25572341-2013

Formulation and production of NPF "Fire Protection Laboratory", LLC

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PRODUCT DESCRIPTION

Water-based fire protection coating for steel structures "Stabiterm-217" is a complex poly-component system, which is a suspension of intumescent fillers, various functional additives and pigments in water-dispersed film forming. The effect of the coating is based on the intumescence of the applied coating under high temperature exposure and the formation of a foamed heat-insulating layer.

INTENDED USES

The coating is designed to improve fire resistance of structural steel and is intended for use in construction of various purposes in combination with top coat (ambient air temperature from minus 35°C to 50°C) and moderately aggressive operating environment. Meets the fire safety requirements as specified in GOST R 53295.

PACKAGING

20 kg PET bucket "Jet-180", net weight 20 kg
12 kg bag, net weight 12 kg, dry powder Stabiterm-217 (for water mixing - 6 liters)

CERTIFICATES

Certificate of conformity for fireproof efficiency - C-RU.ПБ34.В.02323 dd 23.05.2018; C-RU.ПБ34.В.01238 dd 09.07.2013; ССРП-РУ.ПБ34.Н.00041 dd 22.07.2015; ССРП-РУ.ПБ34.Н.00068 dd 26.11.2015; ССРП-РУ.ПБ34.Н.00260 dd 08.06.2018.

A quality passport is issued for the each consignment of goods confirming the main physical and chemical characteristics.

PHYSICAL AND CHEMICAL CHARACTERISTICS

Color	White, pastel colors available
Coating external appearance	Smooth matt without pores and cracks
Volume solids	No less than 71%
Touch Dry at temperature (20±2)°C and relative humidity (65±5)%	No more than 3 hours
Density, kg/m³	1,20 – 1,40 kg/m ³
Thinner	Water

FIRE-RESISTANCE RATING

Fire-resistance rating, at 500°C* of steel surface	Metal thickness specified, mm**	Mass factor, m ⁻¹	Paint consumption, kg/m ² ***	Dry film thickness, mm
45 minutes	3,4	294	1,20	0,75
60 minutes	3,4	294	1,92	1,20
90 minutes	5,8	172	2,30	1,44
120 minutes	7,8	128	3,60	2,25

* Time to reach the critical temperature of 500 °C on the sample, min, not less than

** Inverse value of U/A m⁻¹

*** Paint consumption is indicated excluding process losses

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USAGE GUIDELINES

SURFACE PREPARATION

The coating should be applied onto a clean, dry and primed steel surface. Type of primer should be agreed with NPF "Fire Protection Laboratory", LLC. Priming of a surface is made according to technical documents of the primer manufacturer.

When applying fire protection coating on primed steel structures, the condition and quality of the previously applied anti-corrosion coating should be checked and its service life is determined. The primed surface should be without blisters, cracking and peeling. When defects are detected, the anti-corrosion coating should be repaired. The same material should be used for repairs. Primed surfaces should be cleaned of dirt, dust and degreased with organic solvents if necessary. If the use of solvent is unacceptable, use solutions of detergents.

APPLICATION

Fire protection coating is applied on the steel structures surface with a brush, roller or airless spray-painting equipment.

Application temperature range +5°C to +40°C, relative humidity up to 80% and a steel surface temperature at least 3°C above the dew point.

Before use, the paint should be mixed thoroughly, in the process of applying additional mixing is recommended to increase the fluidity within 5 minutes by mechanical and 15 minutes by hand. Dilution with water is not recommended. In the case of specific application conditions may be diluted with water in the amount not exceeding 5% by weight. Water temperature must be no lower 5°C.

The paint should be applied on a dry surface, evenly layered, without gaps and sagging, with careful processing of the joints of individual parts. The paint is applied on the surface of steel structures using a brush, roller or airless spray-painting equipment.

The preferred application method is airless application using airless spray equipment with a plunger pump type: "GRACO", "WAGNER", "Contractor".

Before applying the paint by airless spray-painting equipment, it is necessary to dismantle mesh and coarse-mesh filter and microfilters, install an airless spray nozzle that meets the application conditions (taking into account the geometric dimensions and accessibility of the treated structure).

Recommended airless spray-painting equipment parameters:

- nozzle size - 0.15–0.23 inch, spray angle is selected depending on the geometry of the surface to be painted;
- diameter of the supply hose at least 3/8 inch
- hose length max. 30 m
- working pressure when applying 200–220 bar

The recommended first layer thickness is 300-400 microns. The coating thickness at process applying is controlled by a calibrated wet layer thickness gauge (coating thickness gauge). The thickness of the following layers can be up to 900 microns. The paint is applied in 1-4 layers. Intercoat drying time is 3-6 hours under normal conditions (air temperature 20°C and relative humidity 60%); with decreasing temperature and increasing air humidity drying time may increase. The time of complete drying of the coating under normal conditions (20°C; humidity 60%) is 72 hours. When temperature lower than 20°C and humidity lower than 60% - no less 7 days. Process losses of paint during application depend on the method of

application, the parameters of the treated surface and the application conditions.

To add the paint coat weather resistance, a top coat should be applied. The exposure time between the application of the last layer of paint coat and the application of the finish coating should be at least 24 hours.

**EQUIPMENT
CLEANING.**

Clean all equipment immediately after use with clean water. Without waiting for the paint to dry.

**TRANSPORTATION
AND STORAGE**

Transportation and storage temperature range +5°C to +40°C.

Transportation in packaged form by any kind of transport, ensuring the safety of products, in accordance with the rules of carriage of goods, applicable to each mode of transport.

Store in hermetically sealed containers in warehouses on racks or pallets away from heat sources, in conditions that exclude sunlight and exposure to precipitation.

Guaranteed shelf life of fire protection paint - 12 months from the date of manufacture in full compliance with the conditions of transportation and storage.

**SERVICE LIFE OF
COATING.**

The guaranteed service life of the fire protection coating under the conditions of open air - up to 20 years, indoors – up to 25 years subject to the conditions of application and operation.

SAFETY**PRECAUTIONS**

Painting works to perform in accordance with the requirements of GOST 12.3.035 "Occupational safety standards system. Construction. Painting. Safety requirements"

The area in which painting works are conducted should be provided with supply and exhaust ventilation.

Fire protection paint is a low toxic, fire and explosion-proof material. During storage and use does not emit hazardous substances, does not irritate the skin and mucous membranes.

When applying, personal protective equipment should be used.

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. If the product gets on the skin, wipe with a cleaning cloth, then wash with soap and water.

Fire protection coating for steel structures "Stabiterm-219" is intended for professional use only!

The information provided in this document is based on current knowledge and practical experience in the use of materials.

The manufacturer assumes no legal or other responsibility for the misuse or misinterpretation of this information.

The consumer should always request more up-to-date technical data on specific products, information on which is sent on request.