

PRODUCT DATA SHEET

Sika® Unitherm®-38091 exterior

SOLVENT BASED FIRE PROTECTION COATING FOR STEEL, INTERIOR AND EXTERIOR USE

DESCRIPTION

Sika® Unitherm®-38091 exterior is a solvent based intumescent fire protection coating system which has to be used for structural steelwork which is subject to weathering, high humidity, maritime environment etc. (exterior condition).

Sika® Unitherm®-38091 exterior can also be used for interior steel constructions.

Sika® Unitherm®-38091 exterior is forming a heat insulating layer under the influence of fire and improves the fire resistance of steel parts like columns, girders and framework.

USES

For exterior use on structural steel members like columns, girders and framework with a highly effective protection to delay the steel from reaching critical temperatures.

Note: With critical situation i.e. frequent formation of condensation and/or heating up of surfaces above 45 °C, possible special measures should be taken.

PRODUCT INFORMATION

Packaging	25 kg/pail, net weight
Appearance / Colour	white, liquid
Shelf Life	18 months
Storage Conditions	Store in cool and dry storage conditions and original sealed containers
Density	~1.28 kg/l
Solid content by weight	~70 %
Solid content by volume	~62 %

SYSTEM INFORMATION

CHARACTERISTICS / ADVANTAGES

- Applicable on steel constructions exposed to weathering
- Preserves the appearance of a steel construction
- Applicable to filigree steel structures and complex steel building elements
- Does not increase static load
- Individual coloration possible with corresponding topcoat, various colour shades in RAL, others available

APPROVALS / STANDARDS

GB 14907-2018

Systems

System	Products
Primers	On blast cleaned steel: Zinc rich epoxy: Sika Permacor- 2311 CN, Tie coat: Sika Permacor-2315 CN On galvanised steel: Sika Permacor-2315 CN On manually de-rusted steel: Sika Permacor-2004 CN
Intumescent coating	Sika® Unitherm®-38091 exterior
Topcoat	Topcoat: PVC-AY: Sika Unitherm Top S CN Epoxy: Sika Permacor 2707 CN Polyurethane: Sika Permacor 2330 CN
Consumption	Fire rate Sika® Unitherm®-38091 exterior depends on China standard. See corresponding separate test reports Note: Ratio dry film thickness - wet film thickness varies depending on application method.
Product Temperature	+5 °C min. / +35 °C max.
Ambient Air Temperature	+5 °C min. / +35 °C max. During application and drying of total Sika® Unitherm® coating system including Sika® Unitherm® topcoat as well as transportation special protection measures must be taken against weathering.
Relative Air Humidity	80 % max.
Dew Point	Application temperature shall be at least $\geq +3$ °C above dew point
Surface Temperature	+5 °C min. / +40 °C max.* * If higher temperatures occur, please consult the Technical department for further assistance.
Waiting Time / Overcoating	Sika® Unitherm®-38091 exterior requires a minimum of 24 hours drying prior to application of topcoat. A complete drying of the fire protection coating prior topcoat application is highly recommended. Through-drying of Sika® Unitherm®-38091 exterior can be checked by 'fingernailtest'. Prior to further applications possible contaminations must be removed.

APPLICATION INSTRUCTIONS

SURFACE PREPARATION

Steel with manual de-rusting:

Manual de-rusting (wire brushing or power tool cleaning) according to ISO 8501-1, St. 3.

Steel:

Blast cleaning to Sa 2 ½ according to EN ISO 12944, Part 4.

Galvanised steel:

Free from dirt, oil, grease and corrosion products.

Existing anticorrosive primer/coatings:

A compatibility test with the fire protection system is recommended. For checking and surface pre-treatment please see special technical information sheet 'Primers for Sika® fire protection coatings'. Any damage (impact, corrosion, etc.) should be repaired prior the coating

For further information, please consult the Technical Department.

MIXING

Stir thoroughly with slowly turning mechanical stirrer, free of lumps

APPLICATION

The method of application has a major effect on achieving uniform thickness and appearance. Spray application will give the best results. The indicated dry film thickness is easily achieved by airless spray. In case of application by roller or brush, additional layers may become necessary to achieve the required coating thickness, depending on type of construction, site conditions, colour shade etc. Prior to application a trial on site may be useful to ensure the selected application method will provide the requested results.

Airless spraying:

- Material can be applied undiluted by 5 % Thinner E+B CN
- Airless spray equipment with transmission $> 45 : 1$
- Screens and filters must be removed
- Hose diameter not below $\frac{3}{8}$ "

- Whip 1.5–2 m, diameter 6 may be used
- Recommended nozzle size 0.46–0.61 mm or 0.018–0.024 inch

Brushing/rolling:

- Material can be applied undiluted by 5 % Thinner E+B CN
- Load natural fine bristle brushes or short pile
- Lambswool rollers are recommended

CLEANING OF TOOLS

Immediately after use with Sika Thinner E+B CN.

CLEANING

BASIS OF PRODUCT DATA

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the performance of this product may vary from country to country. Please consult the local Product Data Sheet for the exact description of the application fields.

ECOLOGY, HEALTH AND SAFETY

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety-related data.

LEGAL NOTES

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

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Product Data Sheet
 Sika® Unitherm®-38091 exterior
 April 2020, Version 01.01
 020604000030000084

SikaUnitherm-38091exterior-en-MY-(04-2020)-1-1.pdf

