

PRODUCT DATA SHEET

Sika® Unitherm® Steel W-60

Future name: Unitherm® Steel WB-60

Water-based fire protection coating system for steel, interior use

DESCRIPTION

Sika® Unitherm® Steel W-60 is an ecological, efficient, very fast drying and tough water-based fire protection coating for interior structural steel work.

Sika® Unitherm® Steel W-60 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

Sika® Unitherm® Steel W-60 may only be used by experienced professionals.

For interior 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 e.g. frequent formation of condensation and / or heating up of surfaces above + 45°C adequate arrangements should be taken.

No topcoat required for dry environments except for a coloured decorative finish.

CHARACTERISTICS / ADVANTAGES

- Ecological and efficient water-based coating
- Fast drying
- VOC < 1 g/l
- Free of halogens and aromatic solvents
- Meets Type Z1 classification (e.g. internal conditions includes temperatures till + 5°C and high humidity) without topcoat
- R30 in one application step, R60 in two application steps
- Complies with the highest quality requirements (level 4) of DGNB
- Preserves the appearance of a steel construction
- Applicable to filigree steel structures and complex steel building elements
- Simple application, does not increase static load
- Individual coloration possible with corresponding topcoat, various colour shades in RAL, DB, others available

SUSTAINABILITY

- Complies with German AgBB and French VOC (A+), even as coating system

APPROVALS / CERTIFICATES

Independently fire tested and approved to major European and national standards including:

- EN 13381 part 8 (ref: ETA 20/1157)
- Water based coating for steel protection according to EN 13501 part 2 and EAD 350402-00-1106, DoP, with CE-mark

PRODUCT INFORMATION

Packaging	25 kg and 5 kg net.
Appearance and colour	White
Shelf life	18 months
Storage conditions	in originally sealed containers in a cool and dry environment. Protect against frost!
Density	~1.4 g/cm ³
Flash point	Not applicable
Solid content	~76 % ± 3 by volume (according to BCF Guidance Method)

SYSTEM INFORMATION

System	<u>Approved generic primer types:</u> On blast cleaned steel: On manually de-rusted steel: On galvanized steel: <u>Intumescent coating:</u> Without topcoat: With topcoat: For additional protection of the intumescent coating and for decorative options we recommend the Sika® Unitherm® topcoats: Sika® Unitherm® Top W (water based) Sika® Unitherm® Top S (solvent based)	a) Short / medium oil alkyd, e.g. Sika® Permacor®-1705 b) 2-pack epoxy, e.g. Sika® Permacor®-2706 EG c) Zinc rich epoxy, e.g. SikaCor® Zinc R d) water dispersed zinc rich epoxy, e) Zinc silicate, e.g. SikaCor® Zinc ZS (+ tiecoat Sika® Permacor®-2706 EG) SikaCor® Aktivprimer Rapid or Sika® Poxicolor® Primer HE NEW Sika® Permacor®-2706 EG Sika® Unitherm® Steel W-60 Internal exposure, Type Z1 and Z2 Internal exposure, Type Z1 and Z2
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APPLICATION INFORMATION

Consumption	Example: 1000my dry ≈ 1300 to 1400my wet ≈ 1820 g/m ² ≈ 1.32 l/m ² Fire rate of Sika® Unitherm® Steel W-60 depends on national standard. See corresponding separate consumption table / diagram. Note: Ratio dry film thickness - wet film thickness varies depending on application method. Furthermore, proper ventilation is recommended.
Relative air humidity	Max. 80 %, application temperature shall be at least ≥ 3 K above dew point. During application and drying of total Sika® Unitherm® coating system including Sika® Unitherm® topcoats as well as transportation special protection measures must be taken against weathering.
Surface temperature	Object temperature not below + 5°C, to max. + 40°C* * If higher temperatures occur, please consult the technical department for further assistance.

Waiting time to overcoating

Sika® Unitherm® Steel W-60 requires a minimum of 24 h drying prior to application with itself or topcoat Sika® Unitherm® Top W / Sika® Unitherm® Top S.

A complete drying of the fire protection coating prior topcoat application is highly recommended.

Through-drying of Sika® Unitherm® Steel W-60 can be checked by 'finger-nail-test'.

Prior to further applications possible contaminations must be removed.

Drying time

Drying/Curing

Approx. 24 h for each fire protection coat for interior use at approx. + 20°C object temperature and 60 % relative humidity.

Different temperatures, different relative humidity and different fire protection coating thicknesses have an influence on drying time.

Drying stage at + 20°C, 60 % rel. humidity and 500my dry film thickness:

<u>Drying stage 1</u>	<u>~10 min</u>	(ISO 9117-5)
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<u>Drying stage 6</u>	<u>~20 min</u>	
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BASIS OF PRODUCT DATA

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

FURTHER INFORMATION

Various 'info data sheets' such as primers or repair instructions.

For further information please consult Sherwin-Williams GmbH.

ECOLOGY, HEALTH AND SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

SURFACE PREPARATION

Blast cleaned steel:

Blast-cleaning to Sa 2 ½ according to ISO 8501-1. Free from dirt, oil and grease.

Steel with manual de-rusting:

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

Galvanized steel:

Free from dirt, oil, grease and zinc salts. In case of permanent exposure to submersion and condensation surfaces should be sweep blasted according to ISO 12944-4.

Other surfaces:

Tests should be carried out on the specific surfaces.

For contaminated and weathered surfaces e.g. galvanized or primed areas we recommend to clean with SikaCor® Wash.

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 shall be applied undiluted
- Airless spray equipment with transmission ratio > 45 : 1
- Screens and filters must be removed
- Hose diameter not below ¾"
- Whip 1,5 - 2 m, diameter 6 may be used
- Nozzle size 0.46 - 0.61 mm (0.019 - 0.024 inch)
- Hoses must be used for water-based products only

Brushing / rolling:

- Material shall be applied undiluted
- Load natural fine bristle brushes or short pile lambswool rollers are recommended

CLEANING OF EQUIPMENT

Immediately after use with water.

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LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for the exact product data and uses.

LEGAL NOTES

The information, and, in particular, the recommendations relating to the application and end-use of Sherwin-Williams` products, are given in good faith based on Sherwin-Williams` current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sherwin-Williams` 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. Sherwin-Williams 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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