

Sika® Unitherm® platinum

Solvent free, maximum build, two pack modified epoxy fire protection coating for steel, interior and exterior use

Product Description / Uses	<p>Sika Unitherm platinum is an epoxy fire protection coating to be used on structural steel for interior and exterior conditions.</p> <p>Sika Unitherm platinum is forming a heat insulation layer under the influence of fire and improves the fire resistance of steel parts like columns, girders and framework.</p> <p>Sika Unitherm platinum is independently fire tested and approved to international test standards like EN 13381-8 and BS 476 part 20-22.</p>
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Areas of Application	<p>For interior and exterior use on structural steelwork like columns, girders and framework with a highly effective protection to delay the steel temperature from reaching its critical temperatures for longer time. Particularly beneficial as a workshop material.</p>
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Characteristics / Advantages	<ul style="list-style-type: none">■ 100% total solids, wet-film thickness = dry-film thickness■ Layer thickness up to 4 mm per application■ Simple to apply, without the requirement of any reinforcement,■ Classified according to ETAG 018-2:2006 Type X, i.e. Exterior conditions, no topcoat needed■ Excellent corrosion protection properties according to ISO 12944-5■ Short coating and curing period.■ High mechanical impact-, shock and abrasion-resistance■ Preserves the appearance of a steel structure■ Applicable to filigree and complex steel building elements■ Almost no additional weight loading of the coating compared to other systems
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Product Data

Form

Colour Shade	Light Grey
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Packaging	Sika Unitherm platinum: 16,8 kg Comp. A: 15,0 kg net. Comp. B: 1,8 kg net.
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Storage

Storage Conditions / Shelf-Life	12 months from date of production if stored in undamaged original sealed containers, in dry conditions and protected from direct sunlight
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Technical Data

Material consumption

Specific Gravity liquid approx. kg/l	Solids content approx. %		Theoretical material consumption/coverage without loss for medium dry-film thickness of			
	by vol.	by weight	dry in mm	wet in mm	approx. kg/m ²	approx. m ² /kg
1,2 ± 0,1	100	100	1	1	1,2	0,84

Flash point n/a

Mixing ratio parts by weight 100: 12

Components A:B

Compressive strength (ISO 604) approx. 45 MPa

Adhesion strength (EN ISO 4624): blast clean steel: approx. 10 N/mm²
primed steel: depending on the used system

Tensile strength (ISO 527-2) approx. 10 MPa

Abrasion resistance (ISO 5470-1) approx. 65 mg/1000 R (load: 1000g; disc: CS 10)

Application Details

Substrate Preparation

Steel:

Blast cleaning to Sa 2 1/2 according to EN ISO 12944, Part 4.

Steel/manual de-rusting:

Manual de-rusting (wirebrushing or power tool cleaning) to surface preparation grade St 3, DIN EN ISO 12944, Part 4. Subsequent high pressure or water jetting to remove the corrosion stimulators. The surface must be free of dirt, oil, grease and corrosion products. The service life of the coating can be significantly extended by sandblasting.

Galvanised steel:

The surface must be free of dirt, oil, grease and corrosion products. In case of permanent submersion and exposure to condensation surfaces should be sweep blasted.

Existing coating/old coating:

A compatibility test with the fire protection system is recommended. For testing and surface pre-treatment please consider the special technical information sheet "Primers and surface testing for Sika Unitherm steel fire protection systems".

Any damage (e.g. corrosion) should be repaired prior the coating.

For contaminated and weathered surfaces e.g. galvanized or primed areas, we recommend cleaning.

Coating systems	<u>Primer</u>	
	Steel:	a) Without priming coat b) Sika Permacor 2706 EG
	Steel/manual de-rusting:	Sika Permacor 2029
	Galvanised steel:	Sika Permacor 2706 EG
	Intumescent coating:	Sika Unitherm platinum
	<u>Topcoat</u>	a) Interior b) Exterior where visual changes 1.e. yellowing, chalking or fading of the original colour is not an issue
	If a decorative, weathering and colour resistance finish is required, we recommend the following topcoats:	
	2 component Polyurethane	Sikacor EG4, Sika Permacor 2330 or 2230VHS (various colour shades available)
	2 component Epoxy	Sika Permacor 2707 (decontamination coating)
Application Conditions	Coating surface and environment: at least + 10°C Optimum results are achieved at temperatures over + 15°C Object temperature to max. + 40 °C, Relative humidity max. 80 %, Application temperature shall be at least ≥ 3°C above dew point. During application and curing, the surface shall be protected from moisture (high humidity, rain, etc.) These conditions may affect inter coat adhesion with subsequent coats.	
Application Method / Tools	Mix component A + B very thoroughly using an electric mixer (start slowly, then increase speed) until a homogeneous mixture is achieved. Fill mixed material into clean container and mix again shortly as described above. During mixing and handling of the materials always wear protective goggles, suitable gloves and other protective clothing. 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. Sika Unitherm platinum shall be applied undiluted. <u>Brushing/Rolling:</u> Smaller areas <u>Airless spraying:</u> Single Airless Spray Equipment with flow heater. Pressure ratio: ≥ 66 : 1 Flow rate ≥ 24 l/Min. Pressure rate: at least 200 bar in the spray gun Nozzle size: 0.019 – 0.025 inch and/or 0.48 – 0.64 mm Spraying angle: e.g. 20 – 40° Material temperature: approx. + 35°C at the nozzle outlet Remove mesh. Direct material feed (without suction hose). At low temperatures we recommend insulating the spray hose. Hose length max. 25 m. <u>Repairs:</u> To clean up flaws or damage, grind overlapping areas to a matt finish and clean off all traces of dust. Then apply Sika Unitherm Platinum immediately with a spatula.	
Pot Life	At + 20 °C: approx. 30 min At + 35 °C: approx. 15 min	
Drying times	Touch dry: after approx. 12 hours @ 20°C Fully dry: after approx. 24 hours @ 20°C	

Overcoating intervalsSika Unitherm Platinum coatings:

Min.: 8 hours at 20°C

Max.: interior: 7 days at + 20°C

exterior: 2 days at + 20°C

Sika Unitherm Platinum and SikaCor EG 4, Sika Permacor 2330, 2230 VHS or 2707:

Min.: 24 hours at + 20°C

Max.: interior: 7 days at + 20°C

exterior: 2 days at + 20°C

after applying final layer of Sika Unitherm Platinum.

In each case the preliminary coating must be dry and free from substances which might hinder the bonding process (pressure clean if necessary). If waiting period is longer, the coating should be reactivated.

Temporary storage or transport of coated components must be carried out in an appropriate manner. Straps or chains must not be placed in contact with the coated surface but only with appropriate supporting structures.

Cleaning of Tools

Thoroughly clean with Sika Permacor thinner E+B immediately after completion or interruption of the application process.

Important Notice**EU Regulation 2004/42 (Decopaint Directive):**

The maximum allowed VOC content acc. To EU Regulation 2004/42 (product class IIA / I, type Sb) in the ready for use material is 500 g/l (limit 2010).

The maximum VOC content of Sika Unitherm platinum is < 500 g/l VOC.

Notes regarding hazards

Detailed health and safety information as well as relevant precautionary measures – e.g. physical, safety, toxicological and ecological data – may be found in our material safety data sheets.

Please consider all relevant and applicable regulations regarding hazardous substances.

Value Base

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.

Health and Safety Information

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Material Safety Data Sheet 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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