BUILDING TRUST

PRODUCT DATA SHEET

Sika® Unitherm® Platinum-120- VP

Solvent free, ultra high build, two pack, modified epoxy based, intumescent fire protection coating for internally or externally exposed structural steel. Ideal for in-shop application.

PRODUCT DESCRIPTION

Sika Unitherm Platinum-120 is a solvent-free, 100% solids, modified epoxy based, intumescent fire protection coating for internally or externally exposed structural steel, where it provides high durability and combined corrosion protection (to ISO 12944, Class 5-I & 5-M) and fire protection (up to R120).

It is easily applied with standard airless spray equipment, requires no reinforcement, cures rapidly to a very tough and damage resistant finish, ready for handling and transport next day.

USES

Sika Unitherm Platinum-120 is designed primarily for in-shop application on structural steel that is to be internally or externally exposed. No additional sealers or top coats are required unless specific lightfast coloured finishes are required.

PROPERTIES

- Solvent-free, 100 % solids
- Low odour & zero flash risk
- No primer required
- Easy application with standard 66:1 Airless spray
- Can be applied in 1-coat for up to 4mm dft (dry film thickness)
- Halogen-free
- Thick layers without any additional reinforcement
- Rapid cure – Next day handling & transport
- Very tough – minimal handling damage & touch-up costs
- Suitable for small sections and complex steel sections
- Excellent corrosion protection properties according to ISO 12944, Class 5-I & 5-M (coating system)
- Highly resistant to mechanical impact and damage in service
- Durable for a long service life

TESTS

APPROVAL / STANDARDS

Sika Unitherm Platinum-120 is tested according to BS 476 parts 20-22 and EN 13381-8:2013.

PRODUCT DATA

COLOUR SHADES	Light grey – approx. RAL 7035
PACKAGING	17.2 kg net weight.
SHELF LIFE	24 months, in cool and dry storage conditions and original sealed containers.

SYSTEMS

COATING SYSTEMS	Priming:	
	On blast cleaned steel:	a) without priming coat b) Sika Permacor-1705 c) SikaCor EG1
	On galvanised steel:	SikaCor EG1
	Intumescent coating:	Sika Unitherm Platinum-120
	Without topcoat:	a) Internal exposure b) External exposure where visual changes of the original colour are not an issue.
	With topcoat:	
	If a decorative, colour resistant finish is required, then we recommend the following top coats (2-pack AY PUR):	SikaCor EG-4 SikaCor EG-5
COATING SYSTEM C5-M AND C5-I (ACCORDING TO ISO 12944-5)	Priming:	e.g. SikaCor EG1
	Intumescent coating:	Sika Unitherm Platinum-120
	Topcoat:	e. g. SikaCor EG5
DECONTAMINABLE (FOOD)	Priming:	e. g. SikaCor EG1
	Intumescent coating:	Sika Unitherm Platinum-120
	Topcoat:	e.g. SikaCor EG5
SURFACE PREPARATION	Blast cleaned steel: Blast cleaning ISO 8501-1, Sa 2	
	Galvanised steel: The surface must be free of dirt, oil, grease and corrosion products. In case of permanent submersion or exposure to condensation, the galvanised surfaces should also be sweep/lightly blasted to increase the profile and specific surface area for adhesion.	
SURFACE PREPARATION (CONTINUATION)	Other surfaces: Tests should be carried out on the specific surfaces. Please seek further information on product data sheet 'Primers for Sika® fire protection coatings'. For contaminated and weathered surfaces of galvanized steel or primed areas, we recommend chemical cleaning with SikaCor Wash.	

TECHNICAL DATA

MATERIAL CONSUMPTION

Product	Specific gravity liquid	Solids content approx. %		Theoretical material-consumption/ coverage without loss for medium dry film thickness of			
	approx. kg/L	by vol.	by weight	dry microns	wet microns	approx. kg/m²	approx. m²/kg
Sika Unitherm Platinum-120	1.3 ± 0.1	100	100	1.000	1.000	1.3	0.77

FLASH POINT

Not applicable

MIXING RATIO

(COMPONENTS A : B)

By weight

100 : 7.5

COMPRESSIVE STRENGTH (ISO 604)

Approx. 45 MPa

ADHESION STRENGTH (EN ISO 4624)

Blastcleaned steel: approx. 10 N/mm²
Primed steel: dependent on the primer/system

TENSILE STRENGTH (ISO 527-2)

Approx. 10 MPa

ABRASION RESISTANCE (ISO 5470-1):

approx. 65 mg/1000 R (load: 1000g; disc: CS 10)

HINTS OF APPLICATION

MIXING INSTRUCTIONS/ MIXING TIME

Mix the Sika Unitherm Platinum-120 components A + B together very thoroughly using a power mixer (start slowly, then increase speed), until a fully homogeneous mixture is achieved. Fill this mixed material into a clean container and briefly mix again as described above. During mixing and handling of the materials always wear the correct Personal Protective Equipment (PPE).

APPLICATION METHOD

Application by airless spray will give the best results and is recommended to achieve uniform thickness and appearance. 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-120 must always be applied undiluted. Solvents must not be added.

Brushing/Rolling:
Smaller areas

Airless spraying:
Airless spray equipment i.e. single pump equipment with a flow heater, or plural pump equipment.

Pressure ratio: ≥ 66 : 1
Flow rate: ≥ 24 l/Min.
Pressure rate: at least 200 bar in the spray gun

APPLICATION METHOD (CONTINUATION)	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 Helpful hints: Remove filter mesh. Use direct material feed (without suction hose). At lower temperatures we recommend insulating the spray hose. Max. 25 m length of spray hose Repairs: To make good any misses or damage, abrade adjacent areas to a matt finish, clean off all traces of dust. Mask if necessary and then apply the Sika Unitherm Platinum-120 immediately.
APPLICATION CONDITIONS	Substrate surface and ambient: At least + 10°C, max. + 40°C* Optimum results are achieved at temperatures over + 15°C Relative humidity max. 80% Ambient temperature: At least ≥ 3 K above dew point. *If higher temperatures occur, please consult the Technical Department for further assistance.
POTLIFE	At + 20°C: approx. 30 min At + 35°C: approx. 15 min
CURING AND HANDLING AT 20°C	Touch dry: after approx. 8 hours Hard dry (ready for handling and transport): after approx. 24 hours
OVERCOATING INTERVALS/INTERCOAT WAITING TIMES (AT 20 °C):	Between primer and Sika Unitherm Platinum-120: After the primer reached its final drying time. Between Sika Unitherm Platinum-120 coats: Min.: 6 hours at + 20°C Max.: Interior: 7 days at + 20°C Exterior: 2 days at + 20°C Between Sika Unitherm Platinum-120 and SikaCor EG-4/EG-5: Min.: 24 hours at + 20°C Max.: Interior: 7 days at + 20°C Exterior: 2 days at + 20°C Note: The previously applied coating must be dry and free from any dirt, moisture or contaminants that could prevent or reduce adhesion (clean if necessary). If waiting times are longer than stated, then the coatings should be reactivated by suitable mechanical and / or chemical means. Temporary storage or transport of coated steelwork must be carried out in an appropriate manner. It is 'Good Practise' that straps or chains must not be placed in direct contact with the coated surface.
CLEANING OF EQUIPMENT	Thoroughly clean tools and equipment with Sika Thinner E + B immediately after completion or interruption of the Sika Unitherm Platinum-120 application process.

IMPORTANT NOTICE

EU-DIRECTIVE 2004/42/EC (DECOPAINT-DIRECTIVE)	The maximum allowed VOC content according to EU Regulations 2004/42 (limit 2010) for Product class IIA / j, type Sb, in the ready-to-use material is 500 g/l. The maximum VOC content of Sika Unitherm Platinum-120 is < 500 g/l.

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.

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.

HEALTH AND SAFETY INFORMATION

Information on the safe handling of chemical products, as well as the essential physical, safety-related, toxicological and ecological data can be found in the current safety data sheets. Observe all relevant regulations, e.g. the hazardous substances act. Further notes and information data sheets on product safety and disposal can be found on the Internet at www.sika.de.

LEGAL NOTES

FM 12504 EMS 45308 OHS 585274

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