

PRODUCT DATA SHEET

Sika® Permacor®-2230 VHS Rapid

2-PACK AY-PUR-TOPCOAT

DESCRIPTION

Sika® Permacor®-2230 VHS Rapid is a very high solid 2-pack acrylic-polyurethane-topcoat, with very good optical and mechanical properties.
Low solvent content according to Protective Coatings Directive of German Paint Industry Association (VdL-RL 04).

USES

Sika® Permacor®-2230 VHS Rapid may only be used by experienced professionals.
Top coat for long life corrosion protection of wind turbine towers (exterior and interior) and machine parts.

CHARACTERISTICS / ADVANTAGES

- Very fast curing, short overcoating time
- Good corrosion protection
- Very high solid
- Extremely high colour retention

APPROVALS / CERTIFICATES

- Tested according to Enercon protective coatings specification for towers in combination with primer coats.
- Test reports according to ISO 12944-6, corrosivity categories C4 high and C5 high are available.

PRODUCT INFORMATION

Packaging	Sika® Permacor®-2230 VHS Rapid (A)	250 kg drum and 25 kg net.
	Sika® Permacor®-2230 VHS (B)	200 kg drum and 4.5 kg net.
	Sika® Thinner P	190 l, 25 l and 5 l
Appearance / Colour	RAL 7035, RAL 7038; glossy and mat Others colour shades upon request.	
Shelf life	2 years	
Storage conditions	In originally sealed containers in a cool and dry environment.	
Density	~1.4 kg/l	
Solid content	~70 % by volume	
	~82 % by weight	

TECHNICAL INFORMATION

Chemical Resistance	Weathering, oils, grease and short term exposure to fuels and solvents.
Thermal Resistance	Dry heat up to approx. + 120°C, short term up to + 150°C

SYSTEM INFORMATION

System	<p><u>Steel:</u> Suitable as topcoat onto the following primers and intermediate coats: SikaCor® NCG Base Coat, SikaCor® NCG Base Coat Turbo SikaCor®-6205 VHS Turbo, Sika® Permacor®-2215 EG VHS SikaCor®-2440 MF, SikaCor® TSG Primer</p> <p><u>Hot dip galvanized steel, stainless steel and aluminium:</u> 1 x SikaCor® NCG Base Coat or Sika® Permacor®-2215 EG VHS 1 x Sika® Permacor®-2230 VHS Rapid</p>
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APPLICATION INFORMATION

Mixing Ratio	Components A : B	
	By weight	100 : 18
	By volume	4.1 : 1
Thinner	Sika® Thinner P If necessary max. 3 % Sika® Thinner P may be added to adapt the viscosity.	
Consumption	Theoretical material-consumption/VOC without loss for medium dry film thickness:	
	Dry film thickness	80 µm
	Wet film thickness	115 µm
	Consumption	~0.160 kg/m ²
	VOC	~28.8 g/m ²
	VOC-content (ISO 11890-1)	~252 g/l
Product Temperature	Min. + 5°C	
Relative Air Humidity	Max. 85 %, except the surface temperature is significantly higher than the dew point temperature, it shall be at least 3 K above dew point.	
Surface Temperature	Min. + 5°C	
Pot Life	At + 10°C	~2 h
	At + 20°C	~1.5 h
	At + 30°C	~0.5 h
Drying Stage 6	Dry film thickness 80 µm	(ISO 9117-5)
	+ 10°C after	12 h
	+ 20°C after	5 h
	+ 30°C after	1 h
	Higher film thicknesses will result in longer drying times.	
Waiting Time / Overcoating	<p>Min.: until drying stage 6 is achieved Max.: indoors 3 months / outdoors 4 weeks In case of longer waiting times the surface must be grinded resp. sweep-blasted. Before overcoating ensure that the primed surface is dry and free from oil, grease and dirt. Temporary storage and the transport of coated parts shall be carried out using appropriate methods. Securing belts or chains shall not be in direct contact with the coated surface and suitable secondary packing shall be employed. Do not use shrink-wrap or any other type of packaging like plastic film.</p>	
Drying time	<p>Final drying time At + 20°C and good ventilation the final hardness is achieved within 5 - 7 days.</p>	

APPLICATION INSTRUCTIONS

SURFACE PREPARATION

Steel:

Blast-cleaning to Sa 2 ½ according to ISO 12944-4 (ISO 8501-1).

Free from dirt, oil and grease.

Surface profile 'medium (G)' according to ISO 8503-2, roughness Rz ≥ 50 µm.

Hot dip galvanized steel, stainless steel, aluminium:

Free from dirt, oil, grease and corrosion products.

Surfaces must be slightly sweep blasted with a ferrite-free blasting abrasive.

Surface profile 'fine (G)' according to ISO 8503-2.

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

MIXING

Application with 2-component airless equipment: Stir component A thoroughly before and during application. Fill the material into the tanks of the plural component spraying equipment or put the suction hoses into the material container. If using plural feeded airless equipment (automatic dosage) a dosage control shall be installed to monitor correct mixing ratio. During mixing and handling of the materials always wear protective goggles, suitable gloves and other protective clothings.

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. Adding solvents reduces the sag resistance and the dry film thickness. In case of application by roller or brush, additional applications may become necessary to achieve the required coating thickness, depending on type of construction, site conditions, colour shade etc. Prior to major coating operations a test application on site may be useful to ensure that the selected application method will provide the requested results.

By brush or roller

- Only suitable for small areas

Airless- and Airmix-Spraying:

- High ratio plural feed airless spray equipment
- Pressure min. 150 bar
- Nozzle size 0.38 - 0.53 mm (0.015 - 0.021 inch)
- Spraying angle 40° - 80°
- Recommended material temperature: min. + 15°C
- Other spray parameters might be suitable depending on equipment
- Due to the short potlife we recommend to use plural component airless/airmix equipment and fluid heater
- Information about spraying equipment upon request

CLEANING OF TOOLS

Sika® Thinner P

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.

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.

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. Further notes and information data sheets on product safety and disposal can be found on the Internet at www.sika.de.

GISCODE: PU 50

This coding enables additional information and help with the creation of operating instructions (WINGIS online) to be obtained on the BG Bau service pages (www.gisbau.de).

DIRECTIVE 2004/42/CE - LIMITATION OF EMISSIONS OF VOC

According to the EU Directive 2004/42/CE, the maximum allowed content of VOC (product category IIA / j type Sb) is 500 g/l (Limits 2010) for the ready to use product.

The maximum content of Sika® Permacor®-2230 VHS Rapid is < 500 g/l VOC for the ready to use product.

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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