

Sika® Asplit® VEL TH

Vinylester resin based laminate system

Product Description Sika® Asplit® VEL is 2 part, vinyl-ester based coating and lining system with extended pot-life.

- Uses**
- Especially designed for the use in a chemically stressed environment, where a high chemical resistance is mandatory
 - Internal and external lining of chemical tanks
 - Secondary containment lining in bund areas
 - Binder for GFR Laminate systems.
 - Lining of gutters in process and storage areas

- Characteristics / Advantages**
- High chemical resistance to acids, leaches, solvents and to oxidising agents
 - Applicable on concrete and steel
 - Fast curing
 - Crack bridging properties as laminate layer
 - Accessible
 - Excellent bond strength
 - Easy application
 - For internal and external use
 - Coloured Top coat available, details refers Sika® Asplit® VE Solution grey

Product Data

Form

Appearance / Colours Sika® Asplit® VE solution TH : transparent
Sika® Asplit® VE hardener: opaque
Sika® Asplit® powder fine grey: grey

Packaging Sika® Asplit® VE solution TH : 25 kg drum
Sika® Asplit® VE hardener: 1 kg containers
Sika® Asplit® powder fine grey: 25 kg bag

Storage

Storage Conditions / Shelf Life Sika® Asplit® VE solution TH: 6 month
Sika® Asplit® VE hardener: 6 month
Sika® Asplit® powder fine grey: 24 month

From date of production if stored properly in original, unopened and undamaged sealed packaging, in dry conditions at temperatures between +5°C and +23°C. Protect from frost.



Technical Data

Chemical Base	Formulated Vinylester Resin + Organic Peroxide	
Density	Sika® Asplit® VE solution TH:	~ 1.10kg/l
	Sika® Asplit® VE hardener:	~ 1.10kg/l
	Sika® Asplit® powder fine grey:	~ 1.4kg/l bulk density
Bond Strength	> 1.5 N/mm ² (failure in concrete)	(EN 4624)
Shore D Hardness	Approx. 80 (14 days / +23°C)	(DIN EN ISO 868)
Tensile strength	Approx. 70 N/mm ²	(ISO 527)

Mechanical / Physical Properties

Resistance

Thermal Resistance

Exposure*	
Permanent	+ 80°C
Short-term max. 7 d	+ 80°C
Short-term max. 12 h	+ 100°C

Short-term moist/wet heat* up to +100°C, where exposure is only occasional (steam cleaning etc.).

Chemical Resistance

Chemicals:

According to test groups 1, 1a, 2, 3, 3a, 3b, 4, 4a, 4b, 4c, 5, 5a, 5b, 6, 6b, 7, 7a, 7b, 8, 9, 9a, 10, 11, 12, 13, 14, 15 und 15a

- hydrochloric acid ≤ 37 %
- sulphuric acid ≤ 70%
- nitric acid ≤ 30 %
- aqueous sodium hypochlorite (12 % active chlorine)
- hydrogen peroxide ≤ 30%
- chromic acid ≤ 30%

Resistant to a wide range of chemicals, please ask for detailed chemical resistance list Sika® Asplit® VE TH

System

Information

System Structure

Sika® Asplit® VEL TH, Standard system

Primer or Levelling mortar : 1 x Sika® Asplit® VEL TH

Laminate layer:

Imbedding: 1 x Sika® Asplit® VEL TH + 1 x Vetrotex M123 (300 g/m² glass fabric)

still wet: 1 x Sika® Asplit® VEL TH + 1 x Vetrotex M123 (300 g/m² glass fabric)

still wet: 1 x Sika® Asplit® VEL TH + 1 x surface matt (30 g/m²)
top coat: Not Required

Sika® Asplit® VEL TH, Economical system (i.e. secondary containment area)

Primer or Levelling mortar: 1 x Sika® Asplit® VEL TH

Laminate layer:

Imbedding: 1 x Sika® Asplit® VEL TH + 1 x Vetrotex M123 (300 g/m² glass fabric)

still wet: 1 x Sika® Asplit® VEL TH + 1 x surface matt (30 g/m²)

top coat: Not Required

Sika® Asplit® VEL TH, Heavy duty system (i.e. for loading areas)

Primer or Levelling mortar: 1 x Sika® Asplit® VEL TH

Laminate layer:

Imbedding: 1 x Sika® Asplit® VEL TH + 1 x Vetrotex M123 (450 g/m² glass fabric)

still wet: 1 x Sika® Asplit® VEL TH + 1 x Vetrotex M123 (450 g/m² glass fabric)

still wet: 1 x Sika® Asplit® VEL TH + 1 x surface matt (30 g/m²)

top coat: Not Required

Application Details



Sika® Asplit® VEL TH, High Build Lining System (Not Crack Bridging)

Coating System	Product	Consumption
Primer	100 pbw Sika® Asplit® VE Solution TH 1.5 ppw Sika® Asplit® VE Hardener	~ 0.3-0.4 kg/m ² (mixed)
1 st coat (Scratch Coat)	100 ppw Sika® Asplit® VE Solution TH 1.5 ppw Sika® Asplit® VE Hardener + 200 pbw Sika® Asplit® Power fine grey	~ 0.4 kg/m ² (mixed) ~ 0.8 kg/m ²
2 nd coat (Top Coat self smoothing)	100 ppw Sika® Asplit® VE Solution TH 1.5 ppw Sika® Asplit® VE Hardener + 100 pbw Sika® Asplit® Power fine grey	~ 0.4 kg/m ² (mixed) ~ 0.4 kg/m ²

Sika® Asplit® VEL TH, Standard system

Coating System	Product	Consumption
Primer or Levelling mortar	100 pbw Sika® Asplit® VE solution TH 1.5 ppw Sika® Asplit® VE hardener 100-200 pbw Sika® Asplit® powder fine grey	~ 0.55 kg/m ² ~ 0.01 kg/m ² 0.55-1.10 kg/m ²
Laminate layer Surface matt	100 ppw Sika® Asplit® VE solution TH 1.5 ppw Sika® Asplit® VE hardener Vetrotex M123 (2 x 300 g/m ²) Surface matt (30 g/m ²) 100 ppw Sika® Asplit® VE solution TH 1.5 ppw Sika® Asplit® VE hardener	~ 1.8 kg/m ² (mixed) ~ 0.2 kg/m ² (mixed)

Sika® Asplit® VEL TH, Economical system

Coating System	Product	Consumption
Primer or Levelling mortar	100 pbw Sika® Asplit® VE solution TH 1.5 ppw Sika® Asplit® VE hardener 100-200 pbw Sika® Asplit® powder fine grey	~ 0.55 kg/m ² ~ 0.01 kg/m ² 0.55-1.10 kg/m ²
Laminate layer Surface matt	100 ppw Sika® Asplit® VE solution TH 1.5 ppw Sika® Asplit® VE hardener Vetrotex M123 (1 x 300 g/m ²) Surface matt (30 g/m ²) 100 ppw Sika® Asplit® VE solution TH 1.5 ppw Sika® Asplit® VE hardener	~ 0.9 kg/m ² (mixed) ~ 0.2 kg/m ² (mixed)

Sika®-Asplit® VEL TH, Heavy duty system

Coating System	Product	Consumption
Primer or Levelling mortar	100 pbw Sika® Asplit® VE solution TH 1.5 ppw Sika® Asplit® VE hardener 100-200 pbw Sika® Asplit® powder fine grey	~ 0.55 kg/m ² ~ 0.01 kg/m ² 0.55-1.10 kg/m ²
Laminate layer Surface matt	100 ppw Sika® Asplit® VE solution TH 1.5 ppw Sika® Asplit® VE hardener Vetrotex M123 (2 x 450 g/m ²) Surface matt (30 g/m ²) 100 ppw Sika® Asplit® VE solution TH 1.5 ppw Sika® Asplit® VE hardener	~ 2.5 kg/m ² (mixed) ~ 0.2 kg/m ² (mixed)



Anti-slip top coat	(optional)	
Anti-slip top coat	(optional)	
1 st Top coat	100 ppw Sika® Asplit® VE solution TH 1.0 ppw Sika® Asplit® VE hardener	~ 0.2 kg/m ²
Broadcast	Siliciumcarbide (0.5mm)	~0.50 kg/m ²
2 nd Top coat	100 ppw Sika® Asplit® VE solution TH 1.0 ppw Sika® Asplit® VE hardener	~ 0.2 kg/m ²
<p>Notes:</p> <ul style="list-style-type: none"> - In case Sika® Asplit® VE TH is applied as primer Sika® Asplit® powder fine grey does not have to be added - These figures are theoretical and do allow for additional material required due to surface porosity, surface profile, variations in level, wastage etc. - Vetrotex M123 is the recommended glass fabric. However equivalent alternative glass fabrics can be used. Please refer to your Sika partner for advise. - The amount of Sika® Asplit® VE hardener can be reduced to 1% in case of application temperature above 30 °C 		

Substrate Quality	Substrates must be sound and of sufficient compressive strength (minimum 25 N/mm ²) with a minimum pull off strength of 1.5 N/mm ² . The substrate must be clean, dry and free of all contaminants such as dirt, oil, grease, coatings and surface treatments, etc. If in doubt, apply a test area first.
Application Conditions / Limitations	
Substrate Temperature	+5°C min. / +35°C max.
Ambient Temperature	+5°C min. / +35°C max.
Substrate Moisture Content	< 4% pbw moisture content. Test method: Sika®-Tramex meter, CM - measurement or Oven-dry method. No rising moisture according to ASTM (Polyethylene-sheet).
Relative Air Humidity	80% r.h. max.
Dew Point	Beware of condensation! The substrate and uncured floor must be at least 3°C above the dew point to reduce the risk of condensation or blooming on the floor finish.
Application Instructions	
Mixing	Levelling mortar: Part A : part B = 100 : 1.5 : 100-200 (by weight) Laminate layer and top coat: Part A : part B = 100: 1.0 - 1.5 (by weight)
Mixing Time	<i>Levelling mortar:</i> Prior to mixing, stir part A mechanically. When all of part B has been added to part A, mix continuously for 1–2 minutes until a uniform mix has been achieved. Add, while stirring slowly the total amount of Sika® Asplit® VEL powder <i>Laminate layer and top coat:</i> Prior to mixing, stir part A mechanically. When all of part B has been added to part A, mix continuously for 1–2 minutes until a uniform mix has been achieved. Over mixing must be avoided to minimise air entrapment.
Mixing Tools	Sika® Asplit® VE TH must be thoroughly mixed using a low speed electric stirrer (300 - 400 rpm) or other suitable equipment.



Substrate Preparation Concrete substrates must be prepared mechanically using abrasive blast cleaning or scarifying equipment to remove cement laitance and achieve an open textured surface.

Weak concrete must be removed and surface defects such as blowholes and voids must be fully exposed.

Repairs to the substrate, filling of blowholes/voids and surface levelling must be carried out using appropriate products from the Sikafloor®, Sikagard®, Sikadur® or Sika® MonoTop® range of materials.

The concrete or screed substrate has to be primed or levelled in order to achieve an even surface.

High spots must be removed by e.g. grinding.

All dust, loose and friable material must be completely removed from all surfaces before application of the product, preferably by brush and/or vacuum.

Steel surfaces must be prepared mechanically using abrasive blast cleaning. The level SSPC-SP 10 "near white metal blast cleaned" or level Sa 2 ½ according to ISO EN 12944-4 has to be achieved.

Welds and joints have to be prepared according to EN 14879, part 1.

After blast cleaning remove all dust dirt and blasting material. In order to maintain the surface conditions after blast cleaning air-conditioning is recommended.

Application Method / Tools Prior to application, confirm substrate moisture content, relative humidity and dew point.

If > 4% pbw moisture content, substrate has to be dried or Sikagard® 75 EpoCem has to be used as TMB (temporary moisture barrier).

Levelling mortar

Rough surfaces need to be levelled first. Apply the levelling mortar by squeegee/trowel to the required thickness.

Laminate layer

Apply the first layer of Sika® Asplit® VE TH by roller, imbed the glass fabric, apply the second and the third layer in the same way, wet in wet. After application of the final glass fabric de-aerate with a disc roller.

Cleaning of Tools Clean all tools and application equipment with acetone immediately after use. Hardened and/or cured material can only be removed mechanically. Attention: Acetone is a flammable liquid, please handle with care, use all equipment for your personal protection required.

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 product 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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