



Specialist Construction Supplies for Repair, Maintenance, Building & Infrastructure

Sika Armorex L2 Data Sheet

Specification notes

Product: **Sika Armorex L2**

Supplier:

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Product Data Sheet
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Sika® Armorex® L2 High Flow

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High Flow Rapid Strength Grout

Product Description	Sika® Armorex® L2 High Flow is a one part, high flow, rapid strength cementitious grout.
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Uses	<ul style="list-style-type: none">■ For precision, high performance, grouting underneath machine bases, structural steelwork, etc■ For grouting precast concrete units and anchor bars■ Repairing concrete structures■ Filling voids■ For grouting thicknesses between 10 -100 mm
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Characteristics / Advantages	<ul style="list-style-type: none">■ High strength■ Shrinkage compensated■ High flowability retention■ Durable■ Non metallic■ Impressive track record■ Quality assured factory blend■ Chloride free■ >40 N/mm² in 24 hours
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Tests

Approvals / Standards	Conforms to Department of Transport Specification Clause 2601, 6 th & 7 th Editions
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Product Data

Form

Appearance / Colour	Grey powder
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Packaging	25 kg bags
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Storage

Storage Conditions / Shelf-Life	9 months from date of production if stored properly in dry conditions in undamaged and unopened original sealed packaging.
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Construction



Technical Data

Chemical Base	Cement, selected fillers and aggregates, special additives
Density	~ 2180 kgm ³ (wet density)
Layer Thickness	10 mm min. / 100mm max. If greater than 100mm use Sika® Armorex® Armorcrete.

Mechanical / Physical Properties

Compressive Strength Ambient temperature: +20°C

Average Compressive Strength in N/mm² tested to BS 1881:Part 116:1983.						
Consistency	Age (days)					
	1	3	7	14	28	56
Pourable	42	56	68	74	77	79
Flowable	40	54	65	71	74	76
Fluid	30	50	60	67	70	73

Flexural Strength Ambient temperature: +20°C

7 days	28 days
~ 8.0 N/mm ²	~ 10.5 N/mm ²

Direct Tensile Strength Ambient temperature: +20°C

7 days	28 days
~ 2.0 N/mm ²	~ 3.5 N/mm ²

Setting Times Initial Set 5 hours (BS 4550:Part 3: 1978 Section 3.6 @ 20°C)
Final Set 7 hours

Tensile Splitting Strength 5.0 N/mm² @ 7 days (BS1881:Pts 111, 114 & 117:1983)

Ultimate Anchorage Bond Strength 6.7 N/mm²

Flow Cone Test Efflux times @ fluid consistency: (ASTM C939-87)
33 seconds @ 20°C
33 seconds @ 5°C

Resistivity 4536 ohm.cm @ 28 days (Wenner 4Probe Method)

E-Modulus ~ 29'000 N/mm²

System Information

Application Details

Consumption 25 kg yields 13.5 litres of fluid grout. 1850 kg yields 1 m³ of fluid grout

Substrate Quality

Concrete, mortar, stone:
Surfaces must be sound, clean, free from ice, oils, grease, standing water and any loose or friable particles and any other surface contaminants.
The concrete "pull off" (tensile) strength should be > 1.0 MPa.

Steel, iron:
Clean, free from oil or grease, rust and scale etc.

Shutter/Formwork:
All formwork should be of adequate strength, treated with release agent and sealed to prevent leakage. Sealing can be achieved by using **Sikaflex® -11FC+** sealant beneath or around formwork and between joints. Ensure formwork includes outlets for extraction of the pre-soaking water. A header box/hopper should be constructed on one side of the formwork so that a grout head of 150-200 mm can be maintained during the grouting operation.

Substrate Preparation

The substrate should be prepared by suitable mechanical preparation techniques such as high pressure water jetting, breakers, blastcleaning, scabblers, etc.
The concrete substrates should be pre-soaked with clean water continuously for 2 - 6 hours to ensure a saturated surface dry condition throughout the operation.
Immediately before pouring grout, remove *all* excess or standing water from within any formwork, cavities or pockets.

Application Conditions / Limitations

Substrate Temperature +5°C min. / +25°C max.

Ambient Temperature +5°C min. / +25°C max.

Application Instructions

Mixing Measure the appropriate amount of water to achieve the desired grout consistency given in the table below. Heat water if necessary to achieve a temperature between 15-20°C.

Water addition rate per 25 kg bag	
Pourable consistency	3.75 litres
Flowable consistency	4.25 litres
Fluid consistency	4.75 litres

Mixing Time 3 minutes minimum

Mixing Tools Place the water into a forced action grout mixer or in a clean drum. Slowly add complete bag of **Sika® Armorex® L2 High Flow** into the water and continuously mix for 3 minutes in mixer to achieve a uniform and lump free consistency. Alternatively use a slow speed drill (200-500 rpm) and helical mixer.
Dependent on the desired consistency and flow properties, the mixing ratio can be adjusted.

Application Method Immediately after mixing, pour the mixed grout into the header box/hopper ensuring continuous grout flow during the complete grouting operation to avoid trapping air. Use steel banding or chains to assist flow where necessary. For large volume placement, grout pumps are recommended.

Cleaning of Tools Clean all tools and application equipment with water immediately after use. Hardened/cured material can only be mechanically removed.

Notes on Application / Limitations	<ul style="list-style-type: none"> - Do not exceed water addition - Not to be used for patch repair works - Do not use vibrating poker - Use only on clean, sound substrate - Do not apply when there is a risk of frost - Pour or pump from one side only - Keep exposed surfaces to a minimum
Curing Details	
Curing Treatment	<p>After the grout has initially hardened, remove formwork and trim edges while concrete is 'green'. Cure all exposed grout surfaces using Sikafloor® ProSeal.</p> <p>In cold weather apply heat blankets to maintain a constant temperature.</p>
Value Base	<p>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.</p>
Local Restrictions	<p>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.</p>
Health and Safety Information	<p>For information and advice on the safe handling, storage and disposal of chemical products, users should refer to the most recent Material Safety Data Sheet containing physical, ecological, toxicological and other safety-related data.</p>
Legal Notes	<p>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.</p>



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