PRODUCT DATA SHEET

Sika® Armorex® L2 High Flow

HIGH FLOW RAPID STRENGTH GROUT

PRODUCT DESCRIPTION

Sika® Armorex® L2 High Flow is a one part, high flow, rapid strength cementitious grout.

USES

- For precision, high performance, grouting under-neath 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
- Steel reinforcement anchoring

CHARACTERISTICS / ADVANTAGES

- 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

APPROVALS / STANDARDS

Meets the requirements of BS EN 1504-6

PRODUCT INFORMATION

Chemical Base	Cement, selected fillers and aggregates, special additives
Packaging	25kg bags
Appearance / Colour	Grey powder
Shelf Life	9 months
Storage Conditions	Store properly in dry conditions in undamaged and unopened original sealed packaging
Density	~ 2180 kg/m^3 (wet density)
Maximum Grain Size	1.0 mm
Compressive Strength	**Compressive Strength tested to BS 1881:Part 116:1983** - ambient temperature +20°C

	1 day	3 days	7 days	28 days
Pourable	~42MPa	~56MPa	~68MPa	~77MPa
Flowable	~40MPa	~54MPa	~65MPa	~74MPa
Fluid	~25MPa	~45MPa	~60MPa	~70MPa

Modulus of Elasticity in Compression	~29 GPa

Flexural Strength	7 days	28 days	(BS 1881)
	~8MPa	~10.5MPa	
	Ambient temperature +20°C		
Tensile Strength	7 days	28 days	(BS 1881)
	~2MPa	~3.5MPa	
	Ambient temperature +20°C		
Pull-Out Resistance	Pull out (Dry)	Displacement < 0.6mm at load of 75KN (BS EN 1504-6)	(EN 1881)
	Pull out (Wet)	Displacement < 0.6mm at load of 75KN (BS EN 1504 - 6)	
	Ultimate Anchorage Bond Strength 6.7 MPa		
Electrical Resistivity	~4.5 (K.ohm.cm)		(Wenner Test)

APPLICATION INFORMATION

Yield	25 kg yields 13.5 litres of fluid grout 1850 kg yields 1m^3 of fluid grout		
Layer Thickness	10 mm min. / 100mm max		
Flowability	**Flow cone test**		
	5°C	33 seconds	(ASTM C939-87)
	20°C	33 seconds	
	Efflux times at fluid consistency		
Ambient Air Temperature	+5°C min. / +25°C max.		
Substrate Temperature	+5°C min. / +25°C max.		

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY / PRE-TREATMENT

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.

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 15-20ºC.
Water addition per 25kg bag

Pourable consistency	3.75 litres
Flowable consistency	4.25 litres
Fluid consistency	4.75 litres

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

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.

CURING TREATMENT

After the grout has initially hardened, remove formwork and trim edges while concrete is 'green'. Cure all exposed grout surfaces using Sikafloor® ProSeal. In cold weather apply heat blankets to maintain a constant temperature.

CLEANING OF TOOLS

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

LIMITATIONS

- Do not exceed water addition
- Not to be used for patch repair works
- Do not use vibrating pokers
- 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

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.

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 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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