

PRODUCT DATA SHEET

Rokkon[®] R (FS)

POLYESTER RESIN BASED CAPSULE FOR ROCK STABILISATION

DESCRIPTION

Rokkon[®] R (FS) resin capsules contain very high quality polyester resin and its catalyst in precisely measured quantities. The capsules are designed to be inserted into the drill holes for the purpose of mining or tunneling.

The rotating bolt during insertion, forces resin and catalyst to come in contact and thus ensuring homogeneous mixing of the catalyst and the resin. The homogenous mix fills the annular space between the bolt and the bore hole and holds the bolt firmly and permanently.

USES

Rokkon[®] R (FS) resin capsules are developed for stabilisation of strata in tunnels and mining applications. The basic purpose of strata reinforcement by Rokkon[®] R (FS) resin capsules is to prevent the freshly exposed rocks particularly overhead after each blast from collapsing. Rokkon[®] R (FS) resin capsules may be used for the purpose of both point anchorage and full column grouting.

CHARACTERISTICS / ADVANTAGES

- Controlled setting time
- Permanent anchorage unaffected by vibration or by corrosive environment
- Distributed anchorage - no localised high stresses, induced in bolted rock
- Reliability: laboratory tested pre packed material, minimise complications like prolonged setting time, limited load bearing ability, etc.
- Chemical & corrosion resistance - the cured polyester resin is resistant to fresh and salt water, oils, grease, petrol, salts etc.

PRODUCT INFORMATION

Chemical Base	Polyester resin
Packaging	32 mm dia x 300 mm length (20 pcs in a box)
Colour	Yellowish grey paste
Shelf Life	6 months from date of production
Storage Conditions	Store properly in dry condition in undamaged and unopened original sealed packaging between 10 - 20°C away from direct sunlight. Storage at lower temperatures such as in cool rooms is highly recommended and will extend the shelf life. Stock rotation is strongly recommended. When using cool room storage the resin capsules should be allowed time to attain ambient temperature before use otherwise SPIN and HOLD TIMES will be extended.

Density	1.90±0.05 kg/liter	
Compressive Strength	≥ 60 N/mm ² in 1 hour at +22°C	(ASTM C 579)
Pull-Out Resistance	~22 MT/ running meter in 1 day at +22°C	
Tensile Adhesion Strength	≥ 20 N/mm ² (Concrete Failure) in 1 day at +22°C	

APPLICATION INFORMATION

Pot Life	3-4 min at +22°C	(FIP 5.1)
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APPLICATION INSTRUCTIONS

APPLICATION METHOD / TOOLS

- The holes should be drilled to the recommended depth using a rotary percussive machine. The bore holes prior to insertion of Rokkon® R (FS) resin capsules should preferably be cleaned with compressed air to ensure total elimination of foreign particles, rock dust or water that may otherwise remain inside the bore hole.
- After making the bore hole reasonably dry and free from rock dust, required number of cartridges should be inserted into the bore hole with the help of a loader stick. For crown portions, use of a loader stick may not be possible since the cartridges may get dropped down as soon as the loader stick is removed. In such cases the cartridges may be pushed in by rebar itself very gently to eliminate the possibility of puncture of the cartridges during insertion. The rebar should be inserted into the bore hole gently and full length always; the rebar should never be pushed in with the help of a boomer. Pushing the bolt with a boomer may result in buckling of the bolt. The projected end of the bolt should be fixed with pneumatic jack hammer/rotary drill with the help of couplings/adaptor or a pair of nuts and spinning of the bolt should be done for 30 to 45 seconds (75 spin in 1/2 minute at the rate of 150 r.p.m.) in order to ensure homogeneous mixing of the resin and the catalyst. Spinning in the opposite direction for removal of adaptor should be avoided. During the pull-out test, the steel plate should be positioned properly, firmly and completely on the rock surface to avoid misleading results. The torque is generally applied immediately after installation of the bolt and the pull out test may be carried out as early as 30 minutes of insertion of the bolt.

LIMITATIONS

- Capsules should not be inserted in the borehole in running water condition.
- Setting time is inversely proportional to temperature at the time of application.

Sika India Pvt. Ltd.

620, Diamond Harbour Road
Commercial Complex II
Kolkata - 700 034
Tel : +91 33 24472448
Fax : +91 33 23978688
Mail : info.india@in.sika.com



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BASIS OF PRODUCT DATA

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 declared data for this product may vary from country to country. Please consult the local Product Data Sheet for the exact product data.

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.

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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