

# PRODUCT DATA SHEET

## Rugasol<sup>®</sup> F, C

### CONCRETE SURFACE RETARDERS

#### DESCRIPTION

Rugasol surface retarders have been specifically designed for the production of exposed aggregate finishes or for producing a mechanical key to construction joints, stop ends, or subsequent rendering applications.

Rugasol is normally supplied in two standard grades:

Rugasol F: Gel-retarder for application to formwork to produce exposed aggregate work.

Rugasol C: Liquid retarder for horizontal construction joints and surfaces.

Rugasol products will only delay the ultimate hardening and do not stop the setting of cement. When used correctly Rugasol will not stain concrete, even white concrete. Rugasol will not affect the bond of reinforcement to concrete even if accidental splashing occurs, provided it is thoroughly cleaned with clean water.

#### CHARACTERISTICS / ADVANTAGES

##### Rugasol F

- Rugasol F surface retarder is used to expose aggregate on Portland cement based concrete surfaces.
- Rugasol F provides an efficient, economical method of obtaining a rough bonding surface without the need for hacking, chipping or grit-blasting.

- Rugasol F is also used to produce precast panels having a decorative architectural finish showing the colour and texture of natural aggregate. The aggregate remains whole and unbroken
- Rugasol F is painted directly on formwork for walls, ceilings, vertical construction joints or any similar formed concrete surface. Rugasol F dries on the formwork to a tough, but water-soluble film. Protect from rain. Forms may be coated before or after erection. Reinforcing still is placed as usual.
- Rugasol F will retard the set of the cement paste by up to 6 mm (1/4 inch) depth, the depth depends upon the thickness of coating, the time elapsed before the retarder is removed, the cement content of the concrete and the quantity of water in the mix. The ambient temperature will also affect the depth of retardation.

##### Rugasol C

Rugasol C an easy and economical method of obtaining a mechanical key for “kicker” joints, renderings and screeds on horizontal surfaces of freshly placed concrete.

Rugasol C eliminates the need for grit-blasting, hacking and scabbling, leaving the aggregate unbroken and firmly embedded.

The retarding compound in Rugasol C combines with cement at the surface and delays the normal hydration for approximately 24 – 36 hours (high cement contents and temperatures will reduce the retardation). After this retardation has finished, the concrete cures to its full strength.

The depth of exposure can vary for different mix designs; however a depth of up to 4 mm is normal.

## PRODUCT INFORMATION

<b>Chemical Base</b>	1 year if stored properly in unopened original container
<b>Packaging</b>	Rugasol F : 20 kg can Rugasol C : 20 kg pail
<b>Appearance / Colour</b>	Rugasol F : Gel/ Transparent Rugasol C : Liquid/ Transparent
<b>Shelf Life</b>	Min. 12 month if stored properly in unopened, original packaging
<b>Storage Conditions</b>	Dry, cool, shaded place
<b>Density</b>	Rugasol F : approx. 1.06 kg/ L Rugasol C : approx. 1.06 kg/ L

## APPLICATION INFORMATION

<b>Consumption</b>	Rugasol F : Approx. 0.25 - 0.3 kg/ m <sup>2</sup> Rugasol C : Approx. 0.25 - 0.3 kg/ m <sup>2</sup>
<b>Waiting Time</b>	

## APPLICATION INSTRUCTIONS

### APPLICATION

#### Rugasol F

Rugasol F should be stirred before use and must not be diluted.

Rugasol F may be applied to any type of clean formwork. Apply a heavy coat with brush or roller, and allow to dry (normally 2 to 4 hours). No mould oils should be on the forms. Coated surfaces should be protected from strong sunlight.

#### Demolding

##### *Exposed Aggregate:*

For optimum results forms should be removed as soon as possible after the concrete is poured, normally not later than one day in warm weather and up to 2 days in cold weather. If the forms must remain in place in longer period then use two or even three coats of Rugasol F to ensure deep penetrations.

##### *Cleaning Off:*

Some of the soft cement paste will stick to the form when the shuttering is stripped; while still soft this can be removed easily from both the formwork and concrete by a light wire-brushing or with a high pressure water jet. Always clean off immediately after stripping the shutters. The concrete should be kept moist and cured as usual. It is advisable to undertake a small test in all cases prior to use, as cements and condition of use can change from site to site.

#### CLEANING OF TOOLS

All equipment should be washed out after use with water.

#### Rugasol C

Rugasol C is a ready-to-use liquid straight from its container. It should not be diluted. A good uniform coat of material should be sprayed onto the horizontal concrete surface as soon as the initial "bleeding" of the concrete has finished. (A large garden spray or watering can is quite suitable)

#### Demolding

After the initial cure of the concrete has elapsed, the soft cement paste on the surface can be brushed off and the aggregate exposed with clean water. While Rugasol C is in use the concrete surface must be protected from rain, dirt, etc.

#### CLEANING OF TOOLS

Spray equipment should be washed out after use with hot water

#### LIMITATIONS

Rugasol® C only retards the surface setting of the concrete and does not "kill" the set. If the surface is not washed off within the retarding period the concrete will set and reach ultimate strength.

It is not recommended to use set accelerating admixtures in concrete when using Rugasol® C.

#### 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 and recommended uses for this product may vary from country to country. Please 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.

## 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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