

## Rugasol®

### Concrete surface retarders for decorative finishes

Rugasol C and Rugasol MH have been specifically designed and formulated for the production of decorative exposed aggregate finishes to surfaces of concrete with a maximum strength of 20 MPa.

#### Rugasol C

##### Positioning

###### Description

- ☒ Rugasol C is an easy to apply product for use on horizontal surfaces of freshly placed concrete. It achieves a uniform depth of aggregate exposure to provide a decorative architectural effect.
- ☒ The retarding compound in Rugasol C combines with concrete at the surface to delay the normal hydration of cement for a depth of approximately 3 - 6 mm.

##### Uses

- Rugasol C is spray applied to horizontal surfaces of freshly placed concrete areas such as:-
- ☒ Floor slabs
  - ☒ Driveways
  - ☒ Patios
  - ☒ Swimming pool surrounds
  - ☒ Footpaths
  - ☒ Forecourts

##### Advantages

- ☒ Rugasol C provides the opportunity for decorative finishes to concrete around the home, civic amenities, commercial buildings, shopping plazas etc.
- ☒ Rugasol C can be used in conjunction with many different natural aggregates, creating the opportunity for a wide range of colours and texturing effects to be achieved.
- ☒ Concrete with an exposed aggregate surface will provide excellent non skid properties, offering a surface that is both decorative and functional.
- ☒ Rugasol C is ideally suited for use on large areas of concrete such as driveways, footpaths and patios to remove the stark and monolithic appearance of plain concrete.
- ☒ Rugasol C provides an economical surface preparation to concrete that will be overlaid with a plaster or epoxy screed. This eliminates the need for sandblasting or scabbling.

#### Product Data

##### Form/Colour:

Red transparent, water soluble liquid.

##### Packaging:

Rugasol C is available in 5 litre, 20 litre and 200 litre non returnable containers.

##### Storage & Shelf Life:

Twelve (12) months when stored in unopened, original containers between + 5°C and +30°C. Do not expose to direct sunlight in storage.

#### Technical Data

##### Density:

1.05 - 1.06 kg/litre

##### Freezing point:

0°C

##### Flash point:

N/A

##### Application temp:

10°C - 30°C

##### Depth of etch:

3 - 6 mm approximately

##### Coverage rate:

3 - 5 m<sup>2</sup>/litre

#### Application Conditions

##### Instructions for use

The concrete is mixed, placed, compacted and screeded. It should then be lightly trowelled or "bull" floated to achieve a uniform and even finish.

##### Mixing

Rugasol C is supplied as a ready to use liquid and should not be diluted.

##### Application

Immediately after the initial bleed water has disappeared from the concrete, and before setting has commenced, Rugasol C should be applied to the surface using a garden sprayer (or similar). It is essential that a uniform rate of coverage is achieved.

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<b>Removal</b>	<ul style="list-style-type: none"> <li>• Rugasol C will retard the set of the top surface layer of concrete to a depth of approximately 3 - 6 mm. It is essential that the soft cement surface be removed before this retardation period has expired, otherwise the surface will be difficult to remove.</li> <li>• In order to achieve the desired exposed aggregate finish it is essential that the concrete placer monitors the concrete to determine when the soft surface layer of cement should be removed.</li> <li>• The length of the retardation period will vary depending on cement content of the concrete, ambient air temperature, the amount of Rugasol C applied and the time it is left on the surface before removal.</li> <li>• This surface layer should be removed using a hose or low pressure water-blaster and a soft broom, until a good clean exposed aggregate finish is revealed.</li> <li>• As an indication it is normal for the retarding effect of Rugasol C to be finished after 24 hours at 20°C. For temperatures higher than 20°C the retardation period will reduce accordingly. In the summer months it is often necessary to remove the soft surface layer of cement on the same day of concrete placement.</li> <li>• Temperatures lower than 20°C will increase the retardation period of Rugasol C.</li> </ul>
<b>Cleaning</b>	<ul style="list-style-type: none"> <li>• Spray equipment should be washed out immediately after use with warm water.</li> <li>• Rugasol C may stain some surfaces such as paintwork and should be washed off immediately.</li> </ul>
<b>Important Notes</b>	<ul style="list-style-type: none"> <li>• Rugasol C is a concrete retarder and as such does not "kill" the set of the concrete. If the treated surface is not washed off before the retardation period has expired then the concrete will set and harden to reach its ultimate strength.</li> <li>• It is not recommended that set accelerating admixtures be used in concrete when treating with Rugasol C.</li> <li>• If using a water-blaster to wash cement paste from the concrete surface take care to ensure that the pressure of water is not so great that it dislodges the aggregate.</li> <li>• Care should be taken to ensure that washed off cement paste does not enter stormwater pipes or culverts as any remaining residue will harden.</li> </ul>
<b>Notes</b>	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.
<b>Local Restrictions</b>	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.
<b>Safety Instructions</b>	
<b>Protective Measures</b>	<ul style="list-style-type: none"> <li>• To avoid rare allergic reactions, we recommend the use of protective gloves. Change soiled work clothes and wash hands before breaks and after finishing work.</li> <li>• Local regulations as well as health and safety advice on packaging labels must be observed.</li> </ul>
<b>Important Notes</b>	<ul style="list-style-type: none"> <li>• Residues of material must be removed according to local regulations. Fully cured material can be disposed of as household waste under agreement with the responsible local authorities.</li> <li>• Detailed health and safety information as well as detailed precautionary measures e.g. physical, toxicological and ecological data can be obtained from the safety data sheet.</li> </ul>
<b>Legal Notes</b>	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.

## Rugasol MH

### Positioning

#### Description

- Rugasol MH is applied directly to steel or timber formwork prior to the placement of concrete. It achieves a uniform depth of aggregate exposure at the treated surface, proving a decorative architectural effect.
- Rugasol MH retards the setting process of cement on the surface of concrete in contact with treated formwork to a depth of 3 - 5 mm.
- Rugasol MH is a dark pink, solvent based emulsion that is ready to use straight from the container.

#### Uses

Rugasol MH is used for producing decorative exposed aggregate surfaces to concrete that has been cast against formwork or moulds. It is ideal for both insitu formed concrete or precast concrete units, and can be used on either horizontal or vertical surfaces.

#### Advantages

- Precast or insitu concrete surfaces exposed with Rugasol MH will reveal a decorative architectural finish, showing the colour and texture of natural aggregates.
- Can be applied to most types of clean formwork such as steel, timber, plywood etc.
- Ideal for use in conjunction with Rugasol C to provide constant aggregate exposure to both vertical and horizontal surfaces such as insitu stair treads and risers.

### Product Data

#### Form/Colour:

Dark pink, solvent based emulsion.

#### Packaging:

Rugasol MH is available in 4 litre and 20 litre non returnable containers.

#### Storage & Shelf Life:

Store between 5°C and 25°C. Do not expose to direct sunlight in storage. Rugasol MH will last 12 months in unopened, original containers.

### Technical Data

#### Density:

1.05 kg/litre

#### Freezing point:

0°C

#### Flash point:

35°C

#### Application temp:

10°C - 30°C

#### Depth of etch:

3 - 5 mm approximately

#### Coverage rate:

4 - 6 m<sup>2</sup> / litre depending on surface of mould.

### Application Conditions

#### Mixing

- Rugasol MH is supplied as a ready to use emulsion that does not normally require dilution. Should thinning be necessary, due to solvent evaporation, it is recommended that Xylene be used sparingly.
- Thorough stirring of Rugasol MH is required before application.

#### Application

- Formwork should be clean and free from any form release agent. It is recommended that Rugasol MH be applied with either a brush or roller. A thorough and uniform rate of coverage is required to achieve a uniform and even depth of etch.
- Rugasol MH should be protected from direct sunlight once application is complete.
- Once the Rugasol MH has dried (1½ - 2 hours approx.) concrete can be carefully poured against the treated forms or moulds.

#### Removal

- For optimum results forms or moulds should be removed as soon as possible after the concrete is poured. Normally up to 48 hours in warm weather and 72 hours in cold conditions.
- Some of the soft cement paste will adhere to the forms when the mould is stripped. This can be removed easily from both the formwork and the concrete while still soft by washing and brushing. Always clean moulds immediately after stripping as the soft cement paste soon hardens.
- **Note:** *Rugasol MH will retard the set of cement paste by up to 5 mm in depth. This depth depends on the thickness of the coating, the time elapsed before the formwork is removed, the cement content of the concrete and the ambient air temperature.*
- Formwork to be reused may be scraped off and recoated with Rugasol MH as soon as required. If the retarding action is no longer needed any residual material should be completely removed.

<b>Important Notes</b>	<ul style="list-style-type: none"> <li>☒ Rugasol MH is a solvent based product and should not be used near naked flames or cigarettes.</li> <li>☒ When using Rugasol MH in confined spaces some form of ventilation or breathing apparatus is desirable as fumes may cause irritation and discomfort to some people.</li> <li>☒ If formwork or moulds must remain in place longer than the recommended times, use two or even three coats of Rugasol MH to ensure a satisfactory depth of etch. A sample slab should be made first to see if the effect given is that which is desired.</li> <li>☒ When using Rugasol MH in precast work it is advisable to make preliminary tests with various sizes of aggregate. This will enable adjustments to be made to the coating thickness of Rugasol MH to control the depth of etch required.</li> <li>☒ When using untreated or porous formwork for the first time we recommend a minimum of two coats of Rugasol MH. This will impregnate the surface and aid in a uniform depth of exposure.</li> <li>☒ Surfaces treated with Rugasol MH require protection from sunlight prior to concrete placement. Exposure to sunlight may reduce the etching properties of Rugasol MH.</li> <li>☒ Always keep the lid on containers of Rugasol MH when not in use to avoid solvent evaporation.</li> </ul>
<b>Notes</b>	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.
<b>Safety Instructions</b> <b>Protective Measures</b>	<ul style="list-style-type: none"> <li>☒ To avoid rare allergic reactions, we recommend the use of protective gloves. Change soiled work clothes and wash hands before breaks and after finishing work.</li> <li>☒ Local regulations as well as health and safety advice on packaging labels must be observed.</li> </ul>
<b>Transport</b>	Rugasol MH has a dangerous goods classification; Haz. Class 3.3, UN No. 1263, Haz. Chem. 3[Y]E, Packing Group III.
<b>Important Notes</b>	<ul style="list-style-type: none"> <li>☒ Residues of material must be removed according to local regulations. Fully cured material can be disposed of as household waste under agreement with the responsible local authorities.</li> <li>☒ Detailed health and safety information as well as detailed precautionary measures e.g. physical, toxicological and ecological data can be obtained from the safety data sheet.</li> </ul>
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