

## Sika® REP®-HS

### High Strength Thixotropic Fibre Reinforced Patching Mortar

#### Product Description

Sika® REP®-HS is a high strength fibre reinforced cementitious repair mortar, ready to mix. On mixing with water a thixotropic mortar is formed for easy patch repair.

#### Uses

Repair and replacement of damaged concrete on buildings and civil engineering structures.

#### Characteristics / Advantages

- Easy to use
- Can be applied up to 40 mm thick in vertical layers (70 mm with formwork)
- Good adhesion on many substrates
- Finishes ready to be painted if required

#### Product Data

##### Form

Appearance / Colour Powder, grey

Packaging 25 kg bag

##### Storage

Storage Conditions / Shelf-Life 12 months from date of production if stored in undamaged and unopened, original sealed containers, in dry conditions at temperatures between +5°C and +40°C.

#### Technical Data

Density Bulk density: ~ 1.6 kg/l  
Fresh mortar density: ~ 2.3 kg/l

Setting Time Initial: 3 hours (at +25°C)  
Final: 5 hours (at +25°C)

Grading  $D_{max}$ : 10 mm

Layer Thickness 20 to 40 mm in one vertical layer (70 mm with formwork)

Sika Gulf BSC (c)  
P.O. Box 15776  
Adliya, Kingdom of Bahrain  
EMail: sika@batelco.com.bh  
Tel. +973 17735 560  
Fax +973 17732 476  
Website : <http://www.sikagulf.com>



## Mechanical / Physical Properties

<b>Compressive Strength</b>		(According to EN 196-1)
		+25°C
	1 day	~ 35 N/mm <sup>2</sup>
	7 days	~ 60 N/mm <sup>2</sup>
	28 days	~ 80 N/mm <sup>2</sup>
<b>Flexural Tensile Strength</b>		(According to EN 196-1)
		+20°C
	1 day	~ 3 N/mm <sup>2</sup>
	7 days	~ 4 N/mm <sup>2</sup>
	28 days	~ 7 N/mm <sup>2</sup>
<b>Bond Strength</b>	> 2 N/mm <sup>2</sup>	(According to NFP 18-858)

## System Information

### Application Details

<b>Consumption</b>	~ 2.0 kg of powder per m <sup>2</sup> per mm thick
<b>Productiveness</b>	1 bag yields: ~ 12 l of mortar

<b>Substrate Quality</b>	<p><i>Concrete:</i> Surfaces must be sound, clean, free from oils, grease, standing water and any loose or friable adhering particles and any other surface contaminants. The concrete "pull off" (tensile) strength must be &gt; 1.0 N/mm<sup>2</sup>.</p> <p><i>Steel Reinforcement:</i> Surfaces must be clean from rust products, oil, grease and other loosely adhering particles to provide a rust free surface.</p>
--------------------------	--

<b>Substrate Preparation / Priming</b>	<p><i>Concrete:</i> The substrate must be prepared by suitable mechanical preparation techniques such as high pressure water jetting, needle guns, blastcleaning, scabblers etc. and properly pre-dampened.</p> <p><i>Steel Reinforcement:</i> Surfaces must be prepared using approved abrasive blast cleaning techniques.</p> <p><i>Priming Concrete:</i> Saturate the substrate with enough water (SSD condition). Ensure no ponding of water.</p> <p><i>Steel Reinforcement:</i> Where there is insufficient concrete cover over steel reinforcement apply two coats of Sika® MonoTop®-610 reinforcement primer (see separate Product Data Sheet).</p>
--	--

**Sika Gulf BSC (c)**  
 P.O. Box 15776  
 Adliya, Kingdom of Bahrain  
 EMail: sika@batelco.com.bh  
 Tel. +973 17735 560  
 Fax +973 17732 476  
 Website : <http://www.sikagulf.com>



## Application Conditions / Limitations

**Substrate Temperature** +5°C min. / +40°C max.

**Ambient Temperature** +5°C min. / +40°C max.

## Application Instructions

**Mixing** ~ 3 l of water for 25 kg powder

**Application Method / Tools** Sika® REP®-HS can be mixed either mechanically with a pan mixer (max. 500 rpm) or small concrete mixer. Mix to the required consistency. Mix only what you can apply within the pot-life of the material.

No primer required for normal substrate with adequate surface preparation. Ensure that, prior to place the material, the substrate is damp but not wet i.e. saturated surface dry condition. Place repair mortar with a trowel pressing it well onto the substrate. Finishing can be done as soon as the mortar has started to stiffen.

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

**Potlife**  
+25°C: 45 minutes  
+30°C: 30 minutes

**Notes on Application / Limitations** Avoid application in direct sunlight.  
For use in cold weather (i.e. between +5°C and +10°C), the product can be mixed with warm water to accelerate its setting.

When temperatures exceed +35°C, use cold water to increase the pot-life.

## Curing Details

**Curing Treatment** Protect the fresh mortar from early dehydration by using appropriate curing methods.

**Notes** 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.

## Health and Safety Information

**Protective Measures** Cement containing material may cause skin irritation. Wear gloves and goggles or apply barrier cream to hands while working with the mortar.

**Ecology** Please consult our Material Safety Data Sheet

**Transportation Class** No dangerous goods

**Important Notes** 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.

Detailed health and safety information as well as detailed precautionary measures e.g. physical, toxicological and ecological data can be obtained from the material safety data sheet.

**Toxicity** Non Toxic

Sika Gulf BSC (c)  
P.O. Box 15776  
Adliya, Kingdom of Bahrain  
EMail: sika@batelco.com.bh  
Tel. +973 17735 560  
Fax +973 17732 476  
Website : <http://www.sikagulf.com>




## 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.

Sika Gulf BSC (c)  
P.O. Box 15776  
Adliya, Kingdom of Bahrain  
EMail: sika@batelco.com.bh  
Tel. +973 17735 560  
Fax +973 17732 476  
Website : <http://www.sikagulf.com>

