



## RG – Impact & Corrosion Resistant Epoxy Polymer Mortar

High-Performance Epoxy Polymer Mortar for Hydraulic, Marine & Industrial Protection

### Product Description

RG Epoxy Polymer Mortar is a high-performance protective mortar combining epoxy resin, polymer additives and graded aggregates. It forms a dense, durable and corrosion-resistant layer strongly bonded to concrete substrates. The system provides excellent resistance to impact, abrasion, cavitation, carbonation and chemical attack, making it ideal for hydraulic structures, ports, bridges, industrial floors and chemical plants.

### Key Features & Benefits

- High strength – compressive  $\geq 70$  MPa, flexural  $\geq 10$  MPa, bond  $> 4.0$  MPa.
- Resistant to impact, abrasion, cavitation and carbonation.
- Durable against acids, alkalis, salts and freeze–thaw cycles.
- Equivalent to  $> 20$  years of service life under natural exposure.
- Low shrinkage, dense microstructure and strong bonding to substrate.
- Supplied as pre-packed sets for easy mixing and application.

### Scope of Application

- Hydraulic engineering: spillways, sluices, tunnels, stilling basins.
- Marine and port works: piers, docks, offshore foundations.
- Industrial floors in power plants, metallurgy and chemical industries.
- Protective repair of concrete exposed to acids, alkalis, seawater and salts.

### Performance Parameters

Test Item	Unit	Requirement
Compressive strength	MPa	$\geq 70.0$
Tensile strength	MPa	$\geq 10.0$
Bonding strength to concrete	MPa	$> 4.0$ (failure in C50 concrete)
Cavitation erosion resistance	$\text{h} \cdot (\text{g}/\text{cm}^2)$	2.5 (at 40 m/s flow)
Impermeability coefficient	$\text{MPa} \cdot \text{h}$	18 (no seepage)
Elastic modulus	MPa	2100
Carbonation depth	mm	0.8 ( $\approx$ 50 years exposure)
Impact resistance	$\text{kJ}/\text{m}^2$	2.2
Water absorption	%	$\leq 0.18$
Shrinkage	%	$\leq 0.18$
Aging resistance	—	Equivalent to $> 20$ years natural exposure
Chemical resistance	—	Resistant to 50% NaOH, 50% $\text{H}_2\text{SO}_4$ , 10% NaCl
Toxicity / VOC	—	Pass (benzene, toluene, xylene, TVOC)

### Construction Process

- Substrate must be clean, roughened and free from laitance, dust or oil.
- Mix resin and hardener (3:1 by weight), then add graded aggregates.

- Apply within 45 minutes of mixing; compact and finish with trowel.
- Protect surface during curing; full strength after 7 days at 20°C.

## **Packaging & Storage**

- Supplied in pre-packed sets (resin + hardener + aggregates).
- Shelf life: 12 months in sealed, dry and ventilated storage.
- Avoid direct sunlight, moisture and contact with incompatible chemicals.

## **Disclaimer**

The information in this Technical Data Sheet is based on laboratory tests and field applications and is provided in good faith. Sino-sina Building Materials Co., Ltd. makes no warranty for results obtained under conditions beyond its control. Users should verify suitability through site trials before large-scale application.