

HQS-Super400 huaqiansu

— — Special for Lean manufacturing of modified polymer cement waterproof mortar.

Uses

HQS-Super400 huaqiansu is suitable for preparing and producing plastering construction polymer waterproof mortar or scraping construction polymer waterproof mortar in factory workshops or construction sites. The preparation and production of polymer waterproof mortar can be used for the construction of the following impermeable and waterproof projects:

- Waterproof and impermeable engineering for exterior walls, roofs, basements, pile foundations, and other parts.

- Waterproof and impermeable engineering for buildings such as drinking pools, swimming pools, chemical tanks, and sewage treatment pools.

- Waterproof and impermeable engineering for various underground projects such as tunnels, subways, civil air defense, mines, and cable trenches.

- Waterproof and impermeable engineering for chemical warehouses, grain reserve warehouses, and food warehouses.

- Waterproof and impermeable engineering for interfaces between reservoirs, dams, ports, waterways, and chemical pipelines.

- Anti leakage plastering or painting of walls made of porous materials such as aerated concrete and Concrete masonry unit.

Advantages

- **Impermeability:**It can make cement mortar have hydrophobic, impermeable, moisture-proof, and waterproof properties.
- **Adhesive force:**It can significantly improve the bonding ability of cement mortar and has the characteristics of fast strength increase.
- **Compactness :** It can optimize the grading of cement mortar, effectively compensate for cement hardening shrinkage, and suppress cracking.
- **Durability:**It can effectively improve the freeze-thaw cycle resistance, moisture heat aging resistance, and corrosion resistance of cement mortar.

Dosage

The dosage is 5.0+ % of the weight of cement.

Indicator parameters

According to the current industry standard JC/T984-2011 《Polymer Cement Waterproof Mortar》 , HQS-Super400 huaqiansu is used to prepare and produce plastering construction type polymer waterproof mortar or scraping construction type polymer waterproof mortar in the factory workshop or construction site. Its physical and mechanical properties should meet the requirements of Table 1.

Table 1 Physical and Mechanical Properties of Polymer Waterproof Mortar

Serial Number	Project		Performance Index
1	setting time	Initial, min	≥45
		Final, h	≤12
2	Impermeable pressure (coated	7d	≥0.5

	specimen), Mpa		
3	Impermeable pressure (mortar specimen), Mpa	7d	≥1.0
		28d	≥1.5
4	compressive strength, Mpa	28d	≥24.0
5	flexural strength, Mpa	28d	≥8.0
6	flexibility (lateral flexibility), mm	28d	≥1.0
7	bonding strength, Mpa	7d	≥1.0
		28d	≥1.2
8	alkali		no cracking or peeling
9	heat resistance		no cracking or peeling
10	frost-resistance		no cracking or peeling
11	water absorption rate, %		≤4.0
12	shrinkage rate, %		≤0.15

Note: The setting time can be adjusted according to user needs and seasonal changes.

Typical Applications

■ Production and preparation of polymer cement waterproof mortar for plastering construction, with reference mix proportions shown in Table 2.

Table 2 Polymer cement waterproof mortar for plastering construction

P. O42.5 ordinary Portland cement	fine sand	HQS-Super400 huaqiansu	water
350kg	650kg	20-30kg	450-550kg

■ Produce and prepare polymer cement waterproof mortar for scratch coating construction, with reference mix proportions shown in Table 3.

Table 3 Polymer Cement Waterproof Mortar for Scraping and Coating Construction

P. O42.5 ordinary Portland cement	Fine stone powder	HQS-Super400 huaqiansu	water
350kg	650kg	40-50kg	500-600kg

Instructions for use

■ Base treatment

□ The base layer should be flat and solid, and the surface dust, dust, oil stains, etc. should be cleaned. The leaking parts should be repaired first, and the surrounding areas where metal or plastic pipes come into contact with different materials should be polished clean.

□ When the base layer is too dry, it can be moistened with water first. When there is no open water, the next construction can be carried out.

■ Material preparation

□ If the finished waterproof mortar prefabricated in the factory workshop is used, the waterproof mortar can be mixed with water according to the manufacturer's product manual, and it can be used until it is mixed into a uniform paste shape.

□ If HQS-Super400 huaqiansu is used to prepare waterproof mortar at the construction site, the cement, fine sand/fine stone powder, and Huaqiansu can be initially mixed in proportion according to the mix ratio in Table 2 or Table 3 of this document, and then mixed with water until they are evenly mixed into a slurry, ready for use.

■ Construction points

□ Small areas can be evenly scraped or brushed with a trowel or hard bristle brush to mix the slurry on the base layer. Large areas of construction can be mechanically sprayed, with a thickness of generally 3-5mm. For underground

impermeable projects, the thickness should be 5-8mm.



□ Layered construction: The recommended thickness for a single construction is no more than 2mm. After the initial setting of the first layer (usually around 4 hours for initial setting and 8 hours for final setting), the second layer should be applied until the design thickness is reached. The construction direction of the front and back should cross to avoid missed brushing, scraping, and plastering.

□ After 24 hours of construction, watering and maintenance are required, and the maintenance time depends on the environmental temperature conditions at the construction site. Generally, it is recommended to take 3-5 days at room temperature.



□ In waterproof and impermeable projects with special requirements, after the waterproof mortar is dry, one or two coats of HQG-4[#] huaqianjiao can be sprayed "wet to wet" for surface treatment, further enhancing the waterproof effect. This not only prevents negligence and omissions during the construction of waterproof

mortar, but also effectively fills and seals the extremely small cracks and pinholes randomly generated during large-scale construction.



Packaging, storage and transportation

The packaging specification of this product is 20kg/bag, or 2.0kg/bag.

This product should be stored in a dry and ventilated environment to avoid rain, water, moisture, and sun exposure. The unopened shelf life is 12 months.

This product is nonflammable, non-explosive, non-toxic and tasteless, and does not contain heavy metals, halogenated hydrocarbons, benzene series, formaldehyde, VOC and other harmful substances. It can be stored and transported as general goods.

Statement on data and other recorded contents

- The data recorded in this document are based on typical experimental values, so there is no guarantee for the recorded content.
- Before use, please confirm the detailed use method and precautions according to this information and product safety data.
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