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The applications of HPS in Tile glue

Hydroxypropyl starch ether (Hereinafter referred to as HPS) is a kind of white fine powder which is made from natural plant, modified and highly etherification, without any plasticizer and organic solvent. It is completely different from the ordinary starch ether or modified starch in china.

1. Technical Index

Appearance	White powder
PH	Alkaline
Solubility	Soluble in cold water
Size	<180 μ m
Viscosity (5% water solution)	5-3000mpas
Hydroxypropoxy (%)	3-32
Solubility with other materials	With good compatibility with other building materials admixture

HPS is mainly used in building mortar, which can affect the consistency of gypsum, cement, and lime based mortar and change the workability and resistance of mortar. HPS is usually used in combination with non modified and modified cellulose ethers. It is suitable for neutral and alkaline systems and can be compatible with most additives in gypsum and cement products (e.g. surfactants, MC, starch and polyvinyl acetate water soluble polymers).

Tile glue is used to make tile adhesive in the adhesive on the surface of the substrate. Paste tile adhesive without mixing with open. Dry powder tile adhesives need to be added to the construction site after mixing with water. HPS is an essential component of these two kinds of tile adhesive. HPS plays an important role in basic and special function tile adhesive.

2. Amount of water

The amount of water added to the tiles refers to the amount of water added to the dry powder tiles. Different starch ethers bring different mortar water content, but HPS-DG301 has better performance.

3. Skid resistance

The European standard EN1308 gives the definition of slip, the corresponding Chinese standard is JCT547, the test requires the use of standard tiles (size: 10 × 10 cm) 10 minutes after the measured slip distance, HPS-DG301 can significantly improve the skid resistance performance of tile.

4. Open-time

Crust refers to the formation of fresh mortar film after coating, resulting in the effective wet adhesive area of tiles is insufficient. Moisture volatilization and hardening of fresh mortar lead to

crusts.HPS-DG301 can delay the crust so as to improve the open-time of tile adhesive,which can improve the effective use of tile glue .

5. Water retention rate

As long as there is water in the mortar system, the cement in the ceramic tile can continue to hydrate and produce mineral crystals,which is the basis for the bonding strength of the cement-based tile glue.Secondly, the water retention capacity of the mortar can greatly reduce the occurrence of cracks.In addition, the water retention capacity can make the mortar easily leveling, and the water retention rate is positively related to the viscosity and additives of cellulose ethers and starch ethers, while HPS-DG301 has higher water retention performance than the common starch ether.

6. Features

- Delay the open-time, make the new mortar has enough time to be used.
- Excellent water retention to ensure adequate tile repair time
- Suitable wettability makes ceramic tile easy to be constructed and effectively bonded
- Can be matched with a variety of tile adhesive formulations.
- Recommended dosage: 0.05%-0.2%