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Headcel HA 在瓷砖胶中的应用

Application of Headcel HA in CTA



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随着陶瓷应用需求的发展,对吸水率低的玻化砖,大尺寸陶瓷板的需求日益增多,开发高性能瓷砖胶粘剂是市场的迫切需求。

随着碳减排的需求,瓷砖胶中水泥逐渐从 Type I 往 Type III 转型,同时配方中水泥的用量会大幅下降,所以,开发高性能瓷砖胶 用纤维素醚,成为一个重要的课题。

许多常用的添加剂,如纤维素醚、乳胶粉,淀粉醚和其它功能性添加剂,对普通硅酸盐水泥基体系的凝结时间有负面影响,影响 早期强度的发展。

Headcel HA 改性甲基羟烷基纤维素醚,是专门为解决以上方案而开发的系列产品,可有效降低对水泥水化的影响,具有非常好的强度表现,特别是早期强度,同时设计兼具优异的开放时间与抗滑移,特别适用于此类高性能瓷砖胶粘剂的需求。

Due to the increasing demand for vitrified tiles with low water absorption and large-size ceramic panels, there is an urgent need in the market for the development of high performance tile adhesives to meet the evolving requirements of ceramic applications.

With the needs to reduce carbon emissions, the cement in CTA will transfer from Type I to Type III, in the mean time, the amount of cement used in the formula will be significantly reduced. Thus developing high performance cellulose ether will become an important subject.

Many additives like cellulose ether、RDP、starch ether and other functional additives will delay the setting time of Portland cement, which will influence the development of early strength.

Headcel HA modified cellulose ethers, is a series of products specially developed to solve the above problems. It can effectively reduce the impact on cement hydration, have very good strength performance, especially the early strength, also designed to have both excellent open time and slip resistance, particularly suitable for the needs of such high performance tile adhesives.

Headcel HA 产品的凝结时间表现 Setting time of Headcel HA products



Setting process

Headcel HA产品的强度表现 Adhesion strength of Headcel HA products





24 hrs(Mpa) Initial(Mpa) Heat ageing 70°C(Mpa) Water immersion(Mpa) Open time-20min(Mpa) Open time-30min(Mpa) Freeze-thaw cycle(Mpa)

Headcel HA 产品性能 Performance of Headcel HA products

Grade	Viscosity/mpa·s Brookfield RV, 2% water solution	Properties
HA1051	6,000-10,000	Less retarding effect High adhesion strength Good slip resistance Long open time
HA1028	6,000-10,000	Less retarding effect High adhesion strength Excellent slip resistance Long open time
HA1850	10,000-15,000	Less retarding effect High adhesion strength Excellent heat resistance Excellent open time
HA1853	10,000-15,000	Less retarding effect High adhesion strength Superior slip resistance Superior open time
HA2032	20,000-26,000	Less retarding effect High adhesion strength Good slip resistance Long open time