

Technical Data Sheet

GROUT AGENT PGA

Pressure grouting agent

Complies with BS 445, BS 446 and BS 447

1.0 Description

PGA is a powder concentrate without chloride, composed of superplasticizer, new efficient expansion agent, corrosion inhibitors, deformers, stabilizers and mineral fibers.

2.0 Uses

PGA is an admixture adding to grout for filling in post-tensioning pre-stressed bridge pipeline

- Duct grouting for all kind of railway, highway and post tensioning pre-stressed bridge.
- Duct grouting for bridges, nuclear power plants and other pre-stressed structures.
- Anti-leaking grouting for joint of various concrete structures.
- Curtain grouting, anchor grouting or filling or repairing of cracks.

3.0 Advantages

- High fluidity and good water retention property.
- No bleeding and high filling.
- Micro-expansion property and high strength.
- High adhesion and anti-rust.

4.0 Properties

Grout added by PGA shows following properties:

Item		Properties	
		Criterion	Results
Compressive strength - M Pa	7d	≥ 30	50.2
	28d	≥ 30	72.3
Steel corrosion effect		No.	No.
Water bonding material ratio - %		0.26 ~ 0.40	0.34
Fluidity - s	Initial	10 ~ 25	21
	3 h	10 ~ 25	23
Bleeding rate - %	3 h	0	0
	24 h	0	0
Free expansion rate - %	3 h	0 ~ 5	0.3
	24 h	0 ~ 5	0.4
Filling degree		Qualified	Qualified

Note: PO42.5 is used for the test and grouting agent counts 10% of cement.

5.0 Instructions for use

- Ratio of water to material is 0.26 ~ 0.40, and it can be slightly adjusted according to different parts of grouting.
- First add 80% ~ 90% of the actual mix of water into blender. Then starting blender, equally add all grouting agent with all time stirring. After use rapid stirring for 3 min; add remaining 10% ~ 20% of water, stirring is continued for 2 min.
- Grouting time from stirring to duct depends on the temperature, usually 30 min. to 1 hr.
- Continual stirring is recommended before and during grouting to maintain uniformity and fluidity.
- Grouting should be used with piston pressure or vacuum pumps and pressure must be greater than 0.7 MPa.
- Grouting temperature should be maintained between 5° C ~ 25° C, otherwise measures should be taken to meet the conditions.

6.0 Packaging

PGA is available in the paper plastic compound bag packing, with a bag 25 kg or 50 kg.

7.0 Storage

It has a shelf life of 6 month if kept in a dry and cool environment in its original packing. Avoid direct sunlight, and pay attention to anti moisture and damaged packaging. And it should be placed on the pallet off the ground in a dry and ventilated room.

8.0 Precautions

Stirrer speed should be not less than 1000 rpm. It is not allowed to add additional water to enhance fluidity due to construction delay. Under the condition of hot climate, the construction process should be chosen at low temperature of the day, such as at night. Under the condition of cold weather the construction should be carried out according to winter construction standard.

9.0 Health & Safety

As with all chemical products, caution should be always be exercised. Protective clothing such as gloves and goggles should be worn. See packaging/MSDS for instructions. Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately.

10.0 Technical support

CasTech offers full technical support package to specifiers, contractors and end users, as well as technical assistance on site and after sales constructions.

CasTech provides detailed method statements on all its products for use in various applications. These must be referred prior to starting the work. The information above is summery intended for guidance only.

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