

Polycarboxylate High Range Water Reducer/Super Plasticiser PC-707

TECHNICAL DATA

1.0 DESCRIPTION

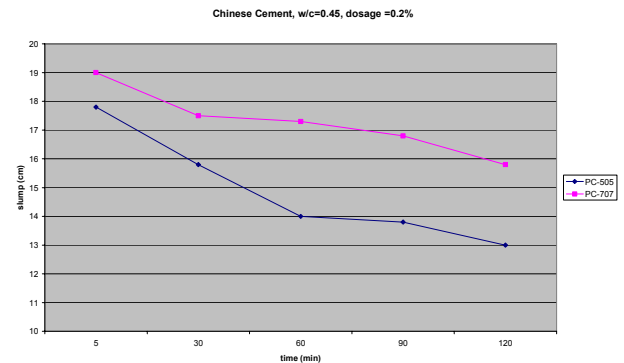
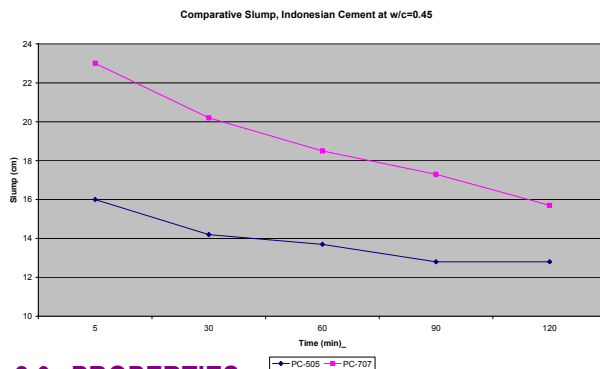
PC-707 is the latest-generation, polycarboxylate concrete additive with high range water reducing properties to provide high workability and high early age strength. PC-707 is primarily designed for use with precast concrete.

Compared with a control sample, addition of PC-707 significantly reduces the mixing water required and therefore produces a higher-quality, reduced viscosity, more-workable concrete. PC-707 has a pronounced plasticizing effect on high-strength concrete and provides a much longer working time (up to 2 hours) compared to other products.

Compared with older generation low-range and mid-range water-reducing admixtures, PC-707 does not retard the mix's set time. This is important in the precast concrete industry where high early strengths are required to meet production schedules.

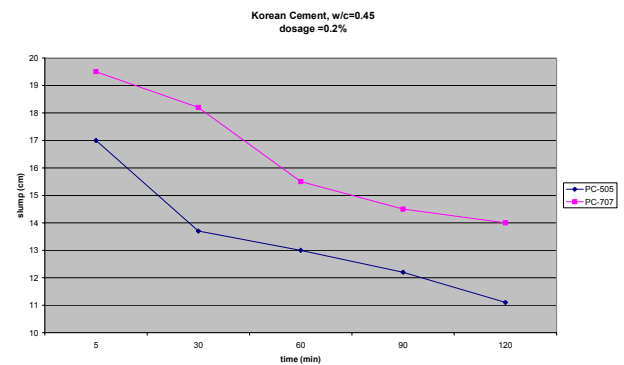
Examples of slump (in centimeters) and slump life (in minutes) between PC-505 (3rd generation polycarboxylate) and PC-707 (latest generation polycarboxylate) can be seen in the graphs below.

PC-707 maintains a higher slump for longer, which is important when placing concrete and self-consolidating concrete into precast concrete formwork.



2.0 PROPERTIES

2.1. Colour	Amber
2.2. pH:	7
2.3. Specific Gravity	1.12
2.4. Flash Point	Non Flammable
2.5. Viscosity	Low
2.6. Toxicity	Non Toxic
2.7. D.G. Classification	Non Hazardous
2.8. Shelf Life	1 year in sealed containers as supplied. Protect from frost.



Fraser Brown & Stratmore Ltd

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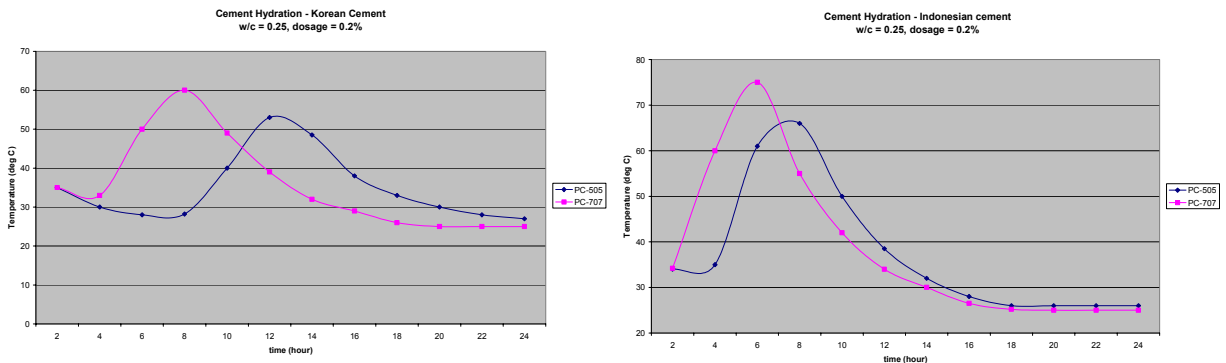
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PC-707

TECHNICAL DATA Continued



The graphs above are examples of cement hydration comparing PC-707 with PC-505. Note that PC-707 reaches a peak temperature many hours ahead of PC-505, itself an advanced polycarboxylate superplasticiser. Earlier hydration provides high early strengths, an important requirement of the precast concrete industry.

3.0 USES

PC-707 was developed for use in:

- Precast concrete
- Production of self-consolidating concrete mixes used in the precast industry
- Concrete requiring extended workability and/or high early age compressive strength.

4.0 APPLICATION INSTRUCTIONS

Usage:

PC-707 can be used with any cement conforming to relevant standards. PC-707 is compatible with most other admixtures. Add each admixture separately and check results. A trial batch is recommended where possible.

Batching Plant: Add PC-707 to the water prior to mixing. Allow 1 minute mixing per cubic metre of concrete. Note the effect on slump over a given time and plan deliveries accordingly.

Concrete truck: Add PC-707 directly to the mixer, then mix on maximum speed for a timed 5 minutes.

Addition:

The normal addition rate of PC-707 is 0.2 kg per 100 kg cement (0.2%).

An ideal water-to-cement ratio is 0.42 – 0.45 (depending on requirements, mix design, etc).

The exact dosage required is determined by site trials. Important considerations include accurately determining water to cement ratio, aggregate moisture correction, aggregate used, cement type, other admixtures used, etc.

5.0 PACKAGING

4, 20 & 200-litre containers.



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