



TOUGHPLAST 150

High Range Water Reducing and Slump Retention Superplasticizer

PRODUCT DESCRIPTION

TOUGHplast 150 is advanced multipurpose admixture based on polycarboxylate polymers especially formulated for the Ready-mixed concrete suppliers. It perform as a multi-functional admixture to obtain a high quality concrete mix with good strength development and extended workability without delayed setting characteristics.

TOUGHplast 150 has been specifically developed to enhance overall optimum performance in terms of water reduction, slump retention, compressive strengths & superior mix rheology, while maintaining control on extension of set retardation under high temperature condition.

TOUGHplast 150 is a powerful dispersant and the deflocculating action helps to produce high performing concrete where durability and high strength are the major requirement.

AREAS OF APPLICATION

- Highly Flowable Concrete especially recommended for Deep foundations such as piles, piers.
- Ready mix concrete with low water to cement ratio and high slump retention.
- For production of High strength Concrete.
- It provides good pumpable concrete for Hot weather concreting.

To produce durable and low permeable concrete.

- For Hot weather concreting (Reduce the incidence of cold joints).

BENEFITS

- It can be used in low and high workability concrete.
- Workability retention for longer periods helps to reduce the slump loss in case of Hot Weather and Long Haul Concreting (More than two and half hours depending on the dosage applied, ambient temperature, quality of Ingredients and Mix Design)
- It provides concrete with self consolidating properties.
- It has versatile performance over various concrete grades.
- ☑ Low water to cement ratio results in high early and ultimate Strength.

COMPATIBILITY

TOUGHplast 150 is compatible with all types of Portland cements, SRC cements and other cementitious materials including PFA, GGBS and microsilica.

SP300 is compatible with all TOUGH BUILD concrete admixtures except **Napthalene based**. All SAS admixtures should be added separately to concrete. Do not mix different admixtures prior to addition.

TOUGHplast 150 does not entrain any air voids into the concrete but even reduces them.



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TECHNICAL PROPERTIES

Septic Gravity	:	1.07 ± 0.02@ 25°C
Appearance	:	Brown Liquid
Air Entrainment	:	1 - 2% depending on dosage
Chloride Content	:	Nil - Tested to B.S. 5075
Freezing	:	0°C, Mix before use

CONFORMITY

TOUGHplast 150 confirms to the following standard.

ASTM C - 494 - Type F & G, B.S 5075 – Part 1 and ASTM C - 1017

DOSAGE

Recommended dosage range 0.5 – 2 % of cement weight. The actual dosage rate applied can exceed the recommended dosage range on common mix design and should be determined in preliminary tests.

Further regulations on maximum dosage rates should be observed.

METHOD OF ADDITION

TOUGHplast150 is supplied as a ready to use dark brown liquid. TOUGHplast 150 can be added to concrete in the mixing cycle after the addition of 70% water or it can be added along with the gauging water. Care must be taken not to add TOUGHplast 150 to dry mix.

TOUGHplast 150 can also be added a few minutes before the actual pouring of concrete for Superplasticizing effect with lower dosage.

EFFECT OF OVER DOSAGE

- Results in increased workability
- Slightly higher entrainment
- Delayed Setting

Reason for overdosage must be ascertained to avoid recurrence. Anyway, overdosing will not adversely affect the overall performance of the concrete mix, provided proper curing to be done. Also formwork removal should be delayed to allow the setting. In most cases the compressive strength is more than compared to controlled concrete.

TOUGHplast 150 preferably dispensed by using automatic dispensing equipment.

HEALTH & SAFETY

TOUGHplast 150 is non-hazardous. It is always advisable to avoid contact with skin or eyes. If contact with skin wash with water. Wear protective goggles and hand gloves while handling. If swallowed seek immediate medical

PACKING & STORAGE

TOUGHplast 150 is available in 1000 Litre and in bulk to site installed storage tanks. It should be stored in cool, shaded warehouses. Shelf life is 12 months.

Before using, homogenize sample by shaking or mixing with a mixer.

After thawing, the product must be used after mixing.