



TOUGHPLAST 100

Superplastisizer for high workability, slump retaining & superior strength



PRODUCT DESCRIPTION

TOUGHplast 100 is a naphthalene sulphonate based liquid superplasticizer for high performance concrete. TP100 is specially formulated to impart high workability to concrete mixes. TP100 converts stiff concrete to flowable concrete due to its high workability. Performances of TP100 also gives excellent slump, retention properties without affecting the setting time. Hence use of TP100 gives high workability, good slump retention without unbalancing the initial and final strength. TP100 thus could effectively be used for hot weather concreting.

TP100 is a powerful dispersant and the deflocculating action helps to produce high performing concrete where durability and high strength are the major requirements. High dispersing action of TP100 produces high flow concrete, which will reduce the need for compaction. TP100 can be used for self-compacting concrete very effectively.

AREAS OF APPLICATION

- High Flow Concrete, recommended for pile.
- Site batched and ready mix concrete.
- To produce durable and low permeable concrete.
- Fumed silica and PFA modified concrete.
- Concrete with GGBS (Ground) granulated Blast Furnace Slag), Hot weather concreting.

- Long Haul concrete.
- For high workability, super flow with pumping properties

BENEFITS

- High workability and superior flow properties reduce the need for compaction.
- Workability retention for longer period helps hot weather and long haul concreting.
- Suitable for highly reinforced and Precast Prestressed concrete due to high flow characteristics... and also it is chloride free.
- Low water cement ratio results early high ultimate strength.
- Slump retention and high flow have no effect on initial & final set.

COMPATIBILITY

TP100 is compatible with all types of Portland cements, SRC cements and other cementitious materials including PFA, GGBS and microsilica.

TP100 is compatible with all TOUGHBUILD concrete admixtures.

All TOUGHBUILD admixtures should be added separately to concrete. Do not mix different admixtures prior to addition.

TP100 does not entrain any air voids into the concrete but even reduces them.

The setting behavior of the concrete is not impaired.



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TECHNICAL PROPERTIES

Septic Gravity	:	1.21 ± 0.03@ 25°C
Appearance	:	Dark Brown Liquid
Air Entrainment	:	1 - 2% depending on dosage
Chloride Content	:	Nil - Tested to B.S. 5075
Freezing	:	0°C, Mix before use

CONFORMITY

Toughplast100 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 – 2.5 % 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

TOUGHplast 100 is supplied as a ready to use dark brown liquid. TOUGHplast 100 can be added to concrete in the mixing cycle after the addition of 90% water or it can be added along with the gauging water. Care must be taken not to add TOUGHplast 100 to dry mix.

TOUGHplast 100 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 100 preferably dispensed by using automatic dispensing equipment.

HEALTH & SAFETY

TOUGHplast 100 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 100 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.