



TuffFlow SP 603

Superplasticiser for Slump Retention and High Strength Concrete

Uses

- To provide excellent acceleration of strength gain at early and later by reducing water demand significantly.
- To significantly improve the workability of site mixed and precast concrete without increasing water demand.
- To provide improved durability by increasing ultimate strengths and reducing concrete permeability.
- Applications where high workability combined with exceptional pumping and flow properties required.

Typical Applications & Advantages

- Makes possible major reductions in water: cement ratio which allow the production of high strength concrete without excessive cement contents.
- Improved cohesion and particle dispersion minimizes segregation and bleeding and improves pumpability.
- Powerful plasticizing action reduces or eliminates the need for compaction and reduced labour costs without increasing water content.
- Compatible with cement replacements such as micro silica, fly ash, etc.
- Long haul and hot weather concreting.

Standards Compliance

TuffFlow SP 603 complies with the requirements of the following standards:
ASTM C494 Type A Type F & Type G depending on dosage used.
BS EN 934 – Part 2: 2001

Product Description

TuffFlow SP 603 is a chloride free, liquid admixture for concrete which is a specially modified superplasticizer to produce a cohesive concrete. This may be used to effect substantial water reductions to concrete with normal setting times and to obtain high strength concrete.

Typical Properties

Appearance	: Dark Brown/Black liquid
Specific gravity	: 1.20 @ 25±2°C
Chloride content	: < 0.01%

Technical Support

GIC provides a comprehensive technical support service to specifiers, end users and contractors and is able to offer on-site technical assistance.

Instructions for Use

Compatibility

TuffFlow SP 603 can be used for all types of Portland cement and for use with any other special cements contact GIC.

Dosage

The optimum dosage of **TuffFlow SP 603** to meet specific requirements should always be determined by trials using the materials and conditions that will be experienced in use. The normal dosage range is between 0.4 to 2.0 litres/100 kg of cementitious material. Dosages outside the normal range quoted above can be used to meet particular mix requirements. Contact GIC for advice in these cases.

Setting

TuffFlow SP 603 affords excellent control over initial and final setting times. Setting times of concrete mixes are related to cement type, mix design and ambient temperature.

Effects of Over Dosage

A severe over dosage of **TuffFlow SP 603** will result in the following:

- Extended workability in retention.
- Retardation of initial and final set.
- Increase in air entrainment.

Provided it is properly cured, the ultimate strength of the concrete will not be adversely affected and will generally be higher than for normal concrete. The retarding effects of very high dosage will be exaggerated with SR cement.





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Packaging & Storage

TuffFlow SP 603 is available in 20 litre & 210 litre drums. For site installations, deliveries will be made in bulk to site storage tanks. **TuffFlow SP 603** has a minimum shelf life of 12 months provided it is stored under cover, out of direct sunlight.

Health & Safety Precautions

TuffFlow SP 603 does not fall into the hazard classifications of current regulations. However, it should not be swallowed or allowed to come into contact with skin and eyes. Suitable protective gloves and goggles should be worn. Splashes on the skin should be removed with water. In case of contact with eyes rinse immediately with plenty of water and seek medical advice. If swallowed seek medical attention immediately – do not induce vomiting.

For further information refer the Material Safety Data Sheet available for this product.

Important note

GIC endeavors to ensure that the technical information contained herein is true, accurate and represents our best knowledge and experience. No warranty is given or implied, as GIC has no control over the conditions of use and the competence of any labor involved in the application are beyond our control.

As all GIC technical data sheets are updated on a regular basis it is the customer's responsibility to check that the product is suitable for the intended application, and that the actual conditions of use are in accordance with those recommended.

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