



TuffFlow PR 50

Low Dosage High Range Water-Reducing Plasticizer / Retarder for Concrete.

Uses

- To increase the workability and/or strength of given cement content whilst increasing its initial and final setting time.
- To facilitate the production of high quality concrete of improved durability and water tightness.
- Hot weather concreting where controlled delays to initial set are beneficial.

Typical Applications & Advantages

- Set retardation controls stiffening time of concrete in hot weather.
- High strengths without increase in cement content or reduction in workability.
- Set retardation allows extra placing time for larger pours.
- Increased workability facilitates placing and compaction.
- Strength specifications and workability can be maintained with less cement.
- In areas of congested reinforcement where high workability is of benefit.

Standards Compliance

TuffFlow PR 50 complies with the requirements of the following standards:
ASTM C494 as Type D.

Product Description

TuffFlow PR 50 is a high range, high performance concrete plasticizer and water reducing admixture. This is designed to optimize hydration of the cement paste subject to the mix design. It is supplied as a brown solution which instantly disperses in water.

TuffFlow PR 50 is a versatile product which can be utilized throughout a varying range of temperatures. It can be used as a standard plasticizer in the low dosage range through to a powerful retarder at the high dosage range.

Typical Properties

Appearance	: Dark Brown/Black liquid
Specific gravity	: 1.21 @ 25±2°C

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 PR 50 can be used for all types of Portland cement and for use with special cements, contact GIC.

Dosage

The optimum dosage of TuffFlow PR 50 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 0.3 to 0.6 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 PR 50 acts efficiently to give controlled retardation of initial set. 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 PR 50 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.

Packaging & Storage

TuffFlow PR 50 is available in 20 litre & 210 litre drums. For site installations, deliveries will be made in bulk to site storage tanks. TuffFlow PR 50 has a minimum shelf life of 12 months provided it is stored under cover, out of direct sunlight.





TufBond

Health & Safety Precautions

TuffFlow PR 50 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.

Rev: October 2007

**Gulf International
Chemicals SAOG**

FACTORY & H.O.

P.O.BOX 132,

PC 124, Rusayl

Sultanate of Oman

Tel: +968 24446800

Fax: +968 24446808

Email:
gulfint@omantel.net.om

**Gulf International
Chemicals**

REGIONAL OFFICE

P.O BOX: 98175,

DUBAI,

UAE

Tel: +971 4 2583221

Fax: +971 4 2583220

Email:
gic_dxb@emirates.net.ae

GIC



AN ISO 9001:2000 CERTIFIED COMPANY

www.gicomman.com