



TuffFlow WP 1

Concrete Integral Liquid Waterproofing Admixture

Uses

- Primarily used in all structural concrete that is constantly or intermittently in contact with water such as sea walls, tunnels, basements, structural and pre-cast concrete in exposed superstructures.
- For longer durability of the concrete and for improved pumpability of the concrete.

Typical Applications & Advantages

- Below ground waterproofing applications like water tanks, foundations, basements, car parking areas, etc.
- To reduce the water permeability of concrete and mortar mixes.
- Mass concrete, swimming pools reservoirs, sea walls, tunnels, etc.
- Lower water cement ratios provide increased strengths and durable concrete with the same workability.
- Sulphate attack is reduced due to the sulphate bearing ground water being resisted.
- Readymix and site batched concrete.

Standards Compliance

TuffFlow WP 1 complies with the requirements of the following standards:

ASTM D 2111-1985

ASTM C 494 Types A

ASTM E96-00 ε¹

Product Description

TuffFlow WP 1 is a liquid concrete admixture designed to give excellent resistance to water ingress. It is based upon a blend of surface active agents, refined lingo sulphonates and organic polymers.

Typical Properties

Appearance	: Dark brown liquid
Specific Gravity	: 1.11@25±2 ⁰ C
Chloride content	: 0.01%
Avg. Water Vapor Transmission	: 0.00
(grains/h.ft ²) - .INCH- POUND UNIT	
Avg. Permeance (Perms) - .INCH- POUND UNIT:	0.00

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 WP 1 is compatible with all types of Portland cements and for use with special cements contact GIC. Never add TuffFlow WP 1 to dry cement or dry aggregates.

Dosage Rate

The optimum dosage of TuffFlow WP 1 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 around 0.30 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.

Effects of Over Dosage

A severe over dosage of TuffFlow WP 1 will result in the following:

- Increase in workability.
- Slight set retardation.
- Slight increase in air content.

Provided it is properly cured, the ultimate strength of the concrete will not be adversely affected. In some cases due to air entrainment ultimate strengths may be lower. The retarding effects of very high dosage will be exaggerated with SR cement.

Packaging & Storage

TuffFlow WP 1 is available in 20 litre and 210 litre drums. For site installations deliveries will be made in bulk to site storage tanks. TuffFlow WP 1 has a minimum shelf life of 12 months provided it is stored under cover, out of direct sunlight.

Health & Safety Precautions

TuffFlow WP 1 does not fall into the hazard classifications of current regulations. However, it should not be swallowed or allowed to come into





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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 to 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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