

SOPRA Tard B

Concrete Setting Retarder

Description

SOPRA Tard B is a liquid admixture designed to delay the setting and hardening of concrete in the early stages. It is based on a chloride-free system formulated to provide extended setting and retardation.

Uses

- * Concreting in hot weather climate.
- * Transportation of concrete over long distances.
- * Pumped and ready mixed concrete.
- * Continuous placement conditions where the upper concrete layer needs to be kept fluid for some time.

Advantages

- * Compatible with all types of cement and cements containing clinker, blast furnace slag or micro silica.
- * Increases ultimate strength.
- * Extends concreting time under hot weather conditions.
- * Provides superior slip-forming properties.
- * Compatible with most other SOPRA admixtures.

Standards Compliance

ASTM C 494 Type B,
BS 5075 Part 1.

Packaging

210 litre drums or 1000 litre containers. Tanker loads are also available.

Storage

12 months storage life when stored in original containers at between 2 and 35 °C in a shaded place.

Properties

Appearance	Brown liquid
Specific gravity @ 25 °C	Typically 1.18
pH	3.8 - 4.2
Chloride content, BS 5075	Nil
Flammability	Non-flammable

Performance Guidelines

Concrete Mix			
5/20 gravel		1140 kg	
0/5 sand		780 kg	
OPC		350 kg	
Dosage, l/100 kg cement	0	0.4	0.8
Water, l/m ³	195	195	195
Slump, mm			
Initial	100	110	130
60 min	60	85	90
90 min	30	60	80
Setting time @ 30 °C, hr			
Initial	2.5	3.0	4.0
Final	4.0	7.0	9.0
Compressive strength, N/mm ²			
3 days	16.1	28.7	32.7
7 days	24.1	32.0	36.0
28 days	32.2	34.0	38.5

Effect of the Admixture on Concrete

Wet concrete: SOPRA Tard B temporarily delays hydration of the cement, enabling the user to extend delivery time and placement.

Hardened concrete: After setting, the hydration process continues normally but produces a higher ultimate strength due to improved crystal formation.

Application Instructions

Dispensing

The correct quantity of SOPRA Tard B should be measured by using a recommended dispenser. It should be added, to obtain the best result, to the concrete with the mixing water.

Dosage

The normal dosing range is 0.4 to 0.8 litres per 100 kg of cement, including any cement replacement material. For hot conditions, the dosage may be increased to 1.0 litre per 100 kg of cement. The optimum dosage of SOPRA Tard B and the time before formwork removal for specific requirements should be determined by trials using materials and conditions as encountered on site.

Overdosing

Exceeding the recommended dosage will result in significant increase in retardation and workability, but provided that adequate curing measures are taken, the ultimate strength of the concrete will be slightly increased. The effects of overdosing will be more marked where Type V cement is used, or when cement replacement materials are present in the mix.

Curing

Normal curing methods to protect concrete surfaces should be adopted.

Cleaning and Disposal

Spillages of SOPRA Tard B should be hosed down with large quantities of water or absorbed on to fine sand and disposed of in accordance with local legislation.

Precautions

Health and Safety

SOPRA Tard B is acidic but non-hazardous. It should not be swallowed or allowed to come into contact with skin or eyes. Suitable protective goggles and gloves should be worn. In the case of contact with eyes, rinse immediately with plenty of water and seek

medical advice. When contact with the skin is made, wash off immediately with soap and water. If swallowed, seek medical attention immediately, do not induce vomiting.

Technical Support

SOPRA provides on-site assistance and consulting services on projects when requested. Technical data sheets on other SOPRA products and guidance on their use are available on request.

Warranty

SOPRA products are guaranteed against defective materials and manufacture and sold subject to SOPRA standard terms and conditions of sale. Whilst SOPRA endeavours to ensure that any advice, information or recommendation given is correct, the company can not accept any liability either directly or indirectly arising from use of its products, since the company has no control over the application of its products. Information contained in this document is given on the best current knowledge. SOPRA policy is one of continuous improvement and the company reserves the right to change its products with out prior notice.