

VERSION: 01

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LARSEN

ADMIXTURES

TECHNICAL DATA SHEET

Rapid Hardener & Frostproof

ACCELERATES SETTING TIMES

INCREASES EARLY STRENGTHS

IDEAL IN COLD WEATHER CONDITIONS

HELPS PREVENT FROST DAMAGE IN NEWLY PLACED MATERIALS

CHLORIDE-BASED

MEETS BS EN 934-2 TABLE 6

Rapid Hardener & Frostproof is a set and hardening accelerator for concrete and mortar. It is a highly concentrated calcium chloride based liquid admixture formulated to accelerate the setting time of cement based mixes in cold weather and increase the rate of hardening of concrete and other cement mixes.



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TECHNICAL DATA SHEET

PRODUCT INFORMATION

FORM	Liquid
COLOUR	Clear pale straw
MATERIAL	Calcium Chloride Solution
HAZARD INFORMATION	IRRITANT - Consult Safety Datasheet before use. Wear gloves, eye protection and protective clothing.
CLEANING	Clean tools, equipment, etc. using water. Mechanical means are necessary when the product has set.
PACKAGING	5L, 25L, 200L or Bulk
STORAGE CONDITIONS	Store in sealed containers in dry conditions, protected from extremes of temperature
SHELF LIFE	24 months in unopened manufacturer's packaging

APPLICATION INFORMATION

DOSAGE	0.25 – 2.5L per 25kg cement (1-10%)
COLD WATER DOSAGE	Typically 1.25 L per 25kg cement
RAPID HARDENER DOSAGE	Typically 0.5 L per 25kg cement
SPECIFIC GRAVITY	1.25
pH	9 - 10
FREEZING POINT	-15°C

DIRECTIONS FOR USE

DOSAGE

Frostproof & Rapid Hardener is recommended for use at rates of 0.25 – 2.5 L per 25kg of cement (1% - 10% of cement content). Trial mixes should be carried out to determine the optimum dosage rate. Acceleration of setting times and strength development will depend greatly on ambient temperature, cement content, cement type, etc. For Cold Weather Working: Typical dosage to provide frost protection down to -4°C is 1.25L per 25kg cement. For Rapid Hardening: Typical dosage is in the range 0.5 – 1.5L per 25kg cement. For Plugging and Leak Sealing: Mix neat with fresh cement for almost instant set.

APPLICATION

Frostproof & Rapid Hardener should be dispensed into the mixer with the gauging water. It should never be added to the dry cement in normal usage. Frostproof & Rapid Hardener can be used with all types of Portland cement, but should not be used with high alumina or sulphate resisting cements. It can also be used with other admixtures, e.g. mortar plasticisers. When used in conjunction with other admixtures each must be dispensed separately into the mix.

COLD WEATHER WORKING

All materials used must be free from ice. The temperature of the mix must be greater than 4°C before placing. When site temperatures are below 5°C, consideration should be given to the use of hot gauging water. Working areas and fresh material should be kept above freezing point until a minimum strength has been attained. This can be accomplished by covering with plastic, insulation or a frost blanket. External concrete should contain entrained air or polypropylene fibres to prevent freeze/thaw damage.

RESTRICTIONS

Current good working practice, British Standards and trade body recommendations must be observed at all times. Setting times will depend greatly on ambient conditions and mix design. It is advisable to carry out trials before commencing work. Not suitable for use in reinforced concrete or any mortars containing metal wall ties or metal reinforcement.