



FORMIX

Concrete Mixtures

FORMFLOW-WINTERAID

Low Temperature Plasticiser

FORMFLOW Winteraid is a chloride-free accelerating admixture with plasticising properties. It is ideal for use when low temperatures require an accelerated set and strength gain of the mortar or concrete.

The inclusion of **FORMFLOW Winteraid** in a mortar or concrete mix will:

- Accelerate initial and final set
- Provide higher early strengths
- Increase rate of strength gain
- Permit earlier release of formwork
- Provide safer winter concreting without delays
- Improve workability
- Enable reduction in water content.

USAGE

1250 ml. **FORMFLOW Winteraid** to 50Kg Portland Cement added preferably to the gauging water or alternatively add direct into the mixer at the same time as the gauging water after the aggregates and cement have been mixed. Accidental overdosing, even to double the recommended quantity, will result in slight increase in initial acceleration but no significant alteration in cured properties.

FORMFLOW Winteraid is suitable for use with all types of Portland Cements.

It is possible that on prolonged storage at very low temperatures a slight sediment may occur in the material. An occasional stir will quickly revert the sediment back into solution.

Ensure all materials used are free from ice and the temperature of the mix prior to placing is not below 4°C.

Typical Effect on Compressive Strengths at Different Ages

Tests carried out to compare a concrete mix including **FORMFLOW Winteraid** with a control mix. The aggregate/cement ratio of the mixes 4.7:1, water/cement ratio adjusted to give equal slump of 65mm, and curing temperature was 15°C. The results obtained are typically as follows:

FORMFLOW Winteraid W/C	Type of			Compressive Strength (Mpa.)				
				16 hrs	24 hrs	3 days	7 days	28 days
Nil	OPC	0.58	4.9	8.3	16.2	26.5	41.8	
1250 ml	OPC	0.54	12.9	15.5	34.2	42.1	49.2	

Typically tests show that the percentage early strength gain over a control mix is greater when the cement content of the mix is greater.

Storage

Store in cool temperature, but above freezing, and stir just prior to use. In the event of freezing, material should be completely thawed and then thoroughly mixed before use. Shelf life is approximately 1 year.

Specification Clause

FORMFLOW Winteraid Accelerated Chloride-Free Plasticiser manufactured the UK for **Formwork Direct International** Limited shall be added to the concrete mix in accordance with the manufacturers recommendations.

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Health and Safety

FORMFLOW Winteraid is non-flammable and harmful by ingestion. Prolonged contact with skin should be avoided by use of gloves. Any splashes should be washed well with water. If contact with eyes occurs wash thoroughly with water and seek medical advice.

Refer to separate **FORMFLOW Winteraid** health and safety leaflet.

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