



FORMIX

Concrete Mixtures

FORMFLOW-A

Accelerated Set Plasticiser

The inclusion of **FORMFLOW-A** in a concrete mix will accelerate the setting and hardening of concrete so that early strength gain is in excess of that obtained even with Rapid Hardening Portland Cement with the increase maintained beyond the 28 day age. This is in addition to its plasticising action.

Due to these characteristics the inclusion of **FORMFLOW-A** in a concrete mix, as well as providing all the benefits obtained from the use of **FORMFLOW-S** Standard Set Plasticiser, will also facilitate:

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| 1 Development of higher early strengths | 3 Safer winter concreting without delays |
| 2 Earlier stripping and greater re-use of moulds | 4 Earlier safe handling of precast units |

Use

850-1700ml **FORMFLOW-A** to 50Kg Portland Cement, added to the gauging water or alternatively mix the chosen quantity in 15 litres of water, add mixture to the cement/aggregates and add additional water as required. Never use at more than the maximum recommended rate or with cements containing calcium chloride or high alumina and sulphate resisting cements.

Cold Weather Concreting

Add **FORMFLOW-A** at rate per 50 Kg cement according to air temperature as shown:

FORMFLOW - A	Air Temperature
850 ml	from 4°C and rising
1300 ml	from 4°C and falling
1700 ml	from 0°C to 5°C

Composition

A modified lignin type water reducing agent with the addition of calcium chloride.

Calcium Chloride

FORMFLOW-A contains calcium chloride and when used at the maximum recommended rate of 1700 ml per 50kg cement, the anhydrous calcium chloride concentration is 1.4% by weight of cement that is below the accepted safe limit for non-reinforced concrete.

Typical Effect on Compressive Strength at Different Ages

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

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FORMFLOW - A per 50 kg cement	Type of Cement	W/C Ratio	Compressive Strengths (N/mm ²)				
			16 hrs	24 hrs	3 days	7 days	28 days
None	OPC	0.58	4.9	8.2	16.0	26.4	41.2
850 ml	OPC	0.49	14.4	19.2	30.2	41.9	52.4
1700 ml	OPC	0.46	16.7	20.8	38.1	46.4	54.6

Storage

Protect from freezing. In the event of freezing, material should be completely thawed out and then thoroughly mixed before use.

Specification Clause

FORMFLOW-A Accelerated Set Plasticiser manufactured by **Formwork Direct International** Limited shall be added to concrete mix in accordance with the manufacturers recommendations.

Health & Safety

FORMFLOW-A is non-toxic and non-flammable. Skin contact should be avoided as the material has a defatting effect. Any splashes should be washed well with water. If contact with eyes occurs wash thoroughly with water, if irritation persists seek medical advice.

Refer to separate **FORMFLOW-A** Health and Safety leaflet.

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