

MasterSet AC 534

Non-chloride accelerating admixture

Material Description

MasterSet AC 534 is a ready-to-use liquid admixture formulated to accelerate the setting time of concrete under cool winter conditions and to produce high-early strength in special application concrete. It does not contain added chloride and conforms to the most stringent chloride ion limits required by concrete industry standards. **MasterSet AC 534** conforms to AS 1478 Type Ac.

Areas of Application

All types of concrete where a non-chloride type accelerator is beneficial:

- Cold weather concreting
- Concrete subject to chloride ion constraints such as high rise buildings in coastal environments
- Concrete placed on galvanised steel floor and roof systems which are left in place
- Precast concrete - either pretensioned or post-tensioned
- Concrete pipes and other manufactured concrete products such as tiles and blocks
- Concrete highway and bridge construction

Characteristics & Benefits

Concrete with **MasterSet AC 534** admixture has a significantly faster setting time than plain concrete. Increasing the dosage rate increases set acceleration.

Both the compressive and the flexural strengths of concrete with **MasterSet AC 534** develop, more rapidly than with plain concrete. Benefits to concrete construction and to the manufacture of concrete products because of this earlier setting and strength gain in cold weather include:

- Earlier finishing of slabwork across a wide range of temperatures without the need for calcium chloride.
- More efficient scheduling, generally faster construction and earlier occupancy.
- Earlier stripping and re-use of forms for walls, precast work and other fast-track construction.
- Earlier structural use of concrete such as tilt-slab, paving, floors, car-park.

- Potential energy savings in steam cured concrete (precast, prestressed, blocks) by reducing curing temperatures and/or steaming time necessary to reach desired transfer strengths.
- Reduced labour costs.

MasterSet AC 534 contains no added chlorides which means it will not initiate or promote the corrosion of reinforcing steel.

Quantity to Use

MasterSet AC 534 is used over a wide dose range of 300 to 1300 mls and above per 100kg of cementitious material. The dosage rate is dependent on the ambient concrete temperatures, cement chemistry and the amount of acceleration required.

The degree of set-acceleration increases with dose rates, allowing the concrete producer to control the setting rate of his product. Where mild acceleration with improved workability and finishing characteristics is required use at 300 to 500 mls per 100kg in conjunction with a low dose of a normal setting admixture such as 300mls per 100kg of MasterPozzolith 370. Where greater acceleration under extremely cold conditions, or where rapid setting is required use at 600 to 1300 mls per 100kg cementitious content.

Compatibility

MasterSet AC 534 can be used with air-entraining admixtures and other Master Builders Solutions admixtures to achieve cost-effective customised concrete performance. However, admixtures should be added separately into the initial batching water to ensure complete distribution throughout the mix. **MasterSet AC 534** should not be used in conjunction with other admixtures supplied by other manufacturers unless specific test information is available.

Note for Test Laboratories

MasterSet AC 534 is designed to perform best in cold weather concrete. Tests conducted in laboratories at 23° +/-2°C will not necessarily produce the degree of set acceleration that will be achieved in the field at lower temperatures.



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Packaging

MasterSet AC 534 is supplied in 20 litre pails, 1000 litre pallecons and bulk delivery.

Storage & Shelf Life

Keep only in the original container in a cool, well-ventilated place. Protect from direct sunlight. Store protected against freezing. Protect from temperatures below: -25 °C.

MasterSet AC 534 has a shelf life of 12 months.

Precautions

For the full health and safety hazard information and how to safely handle and use this product, make sure that you obtain a copy of the Safety Data Sheet (SDS) from our office or website.

Disclaimer

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STATEMENT OF RESPONSIBILITY

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NOTE

Field service where provided does not constitute supervisory responsibility. Suggestions made by MB Solutions Australia Pty Ltd either orally or in writing may be followed, modified or rejected by the owner, engineer or contractor since they, and not MB Solutions Australia Pty Ltd, are responsible for carrying out procedures appropriate to a specific application.

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