

MasterSet[®] AC 100

Non-Chloride hardening accelerator for concrete

DESCRIPTION

MasterSet AC 100 is ready to use liquid accelerating admixture for use in concrete and portland cement. **MasterSet AC 100** admixture brings down setting times in general and specially under cold weather, leading to early high and ultimate increased strengths. In addition, it reduces bleed and segregation while improves workability.

MasterSet AC 100 does not contain any added chloride ions ensuring that the product does not contribute to the corrosion of reinforcing steel. In fact studies indicate **MasterSet AC 100** helps in reduction of chloride attack on concrete.

RECOMMENDED USES

MasterSet AC 100 is formulated for use as accelerator to facilitate high early and higher ultimate strengths in concrete; also to speed up the setting times in normal or especially in cold weather concreting.

Typical applications include:

- Precast/ Prestressed concrete production
- Concrete pavement repairs
- Repairs of the industrial floors
- Repairs of concrete slabs and flat members
- Cold weather concreting
- Early de-stripping in cold weather

FEATURES AND BENEFITS

- Reduced segregation
- Faster setting times – accelerated construction during cold climates
- High Early strengths – Early de-shuttering
- Early stiffening – Quicker finishing operations
- Facilitates concreting even below 5°C

PERFORMANCE TEST DATA

Aspect	: Colourless free flowing liquid
Relative Density	: 1.26± 0.02 at 25°C
pH	: ≥ 6.0 at 25°C
Chloride ion content	: < 0.2%

TEST CERTIFICATION/APPROVALS

- ASTM C 494: Type C
- EN 934-2: T6& T7
- IS 9103: 1999

DOSAGE

Optimum dosage of **MasterSet AC 100** should be determined with trial mixes. As a guide, a dosage

range of 2 Litre to 5 Litre per cubic meter of concrete is recommended at normal temperatures. Higher dosages may be required when certain combinations of materials and conditions are present or acceleration is required at colder climatic conditions.

For addition information on **MasterSet AC 100** admixture or on its use in developing concrete mixes with special performance characteristics, contact your local Master Builders Solutions representative.

APPLICATION

MasterSet AC 100 is a ready-to-use liquid which is dispensed into the concrete together with the mixing water. The dispersing of admixture shall be more uniform if the admixture is added to the damp concrete after 50 to 70% of the mixing water has been added. The addition of **MasterSet AC 100** to dry aggregate or cement is not recommended.

COMPATIBILITY

MasterSet AC 100 is compatible with most admixtures used in the production of quality concrete including normal, other mid-range and high-range water-reducing admixtures, air entrainers, accelerators, retarders, extended set-control admixtures, corrosion inhibitors, and shrinkage reducers.

The effect of **MasterSet AC 100** is dependent upon the cement properties and the type of plasticizers used in the concrete mix. The setting time and early strength gain may be affected if strong retarders are used in the mix.

MasterSet AC 100 is also compatible with slag and pozzolans such as fly ash and silica fume.

CORROSIVITY – NON CORROSIVE

MasterSet AC 100 admixture will neither initiate nor promote corrosion of reinforcing steel embedded in concrete, prestressed concrete or concrete placed on galvanized steel floor and roof systems. Neither calcium chloride nor any calcium chloride-based ingredients are used in the manufacture of **MasterSet AC 100** admixture. In all concrete application, **MasterSet AC 100** admixture will conform to the most stringent or minimum chloride ion limits currently suggested by construction industry standards and practices.

Rate of hardening

The temperature of the concrete mix and the ambient temperature (forms, earth, reinforcement,

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air, etc.) affect the hardening rate of concrete. At higher temperatures, concrete hardens more rapidly which may cause problems with placing and finishing. One of the functions of **MasterSet AC 100** admixture is to accelerate the set of concrete. Within the normal dosage range, it will generally reduce the setting times of concrete containing normal portland cement approximately by 1 hour to 3 hours compared to a plain concrete mix, depending on materials at site and temperatures. Trial mixes should be made with site materials & approximating the job site conditions to determine the dosage required.

It is strongly recommended that concrete should be properly cured particularly in windy and dry climates..

PACKAGING

MasterSet AC 100 is supplied in 245 kg drums or in bulk on request.

STORAGE /SHELF LIFE

MasterSet AC 100 must be stored where temperatures do not drop below +5°C. If product has frozen, thaw at +5°C or above and completely

reconstitute using mild mechanical agitation. Do not use pressurized air for agitation. Store under cover, out of direct sunlight and protect from extremes of temperature.

Shelf life is 12 months when stored as above.

Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging. For specific storage advice consult your local Master Builders Solutions representative.

PRECAUTIONS

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs (which can also be tainted with vapour until product fully cured or dried). Treat splashes to eyes and skin immediately. If accidentally ingested, seek immediate medical attention. Keep away from children and animals. Reseal containers after use. Do not reuse containers for storage of consumable item. For further information refer to the material safety data sheet.

TDS Ref. no.MasterSetAC100/01/1113

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