

3	03 30 00	Cast-in-Place Concrete
	03 40 00	Precast Concrete
4	04 05 13	Masonry Mortaring



MasterSet® AC 534

Accelerating Admixture

Description

MasterSet AC 534 patented, ready-to-use, liquid admixture is formulated to accelerate time of setting and to increase early concrete strengths. MasterSet AC 534 admixture does not contain calcium chloride and is formulated to comply with ASTM C 494/C 494M Type C, accelerating, admixture requirements.

Applications

Recommended for use in:

- Reinforced, precast, pumped, flowable, lightweight or normal weight concrete and shotcrete (wet mix)
- Concrete placed on galvanized steel floor and roof systems which are left in place
- Prestressed concrete
- Fast-track concrete construction
- Concrete subject to chloride ion constraints
- 4x4™ Concrete
- Self-consolidating concrete (SCC)
- Pervious concrete
- Masonry Mortar

Features

- Accelerated setting time across a wide range of temperatures
- Increased early compressive and flexural strengths

Benefits

- Earlier finishing of slabs — reduced labor costs
- Reduced in-place concrete costs
- Reduced or eliminated heating and protection time in cold weather
- Earlier stripping and reuse of forms
- Superior finishing characteristics for flatwork and cast surfaces

Performance Characteristics

Mixture Data: 453 lb/yd³ (269 kg/m³) of Type I cement; 3-4 in. (75-100 mm) slump; concrete temperature 74 °F (23 °C); ambient temperature 50 and 75 °F (10 and 24 °C); non-air-entrained concrete.

Setting time

@ 50 °F (10 °C)

	Initial Set (h:min)	Difference
(h:min))		
Plain	13:44	REF
MasterSet AC 534 admixture @		
> 20 fl oz/cwt (1,300 mL/100 kg)	7:11	- 6:33
> 40 fl oz/cwt (2,600 mL/100 kg)	6:05	- 7:39

Setting time

@ 75 °F (24 °C)

	Initial Set (h:min)	Difference
(h:min))		
Plain	8:18	REF
MasterSet AC 534 admixture @		
> 20 fl oz/cwt (1,300 mL/100 kg)	4:59	- 3:19
> 40 fl oz/cwt (2,600 mL/100 kg)	4:18	- 4:00



Guidelines for Use

Dosage

Concrete: The recommended dosage range for MasterSet AC 534 admixture is 10 – 45 fl oz/cwt (0.65 – 2.9 L/100 kg) of cementitious materials for most concrete mixtures using average concrete ingredients. Because of variations in job conditions and concrete materials, dosage rates other than the recommended amounts may be required. In such cases, contact your local sales representative.

The maximum dosage of MasterSet AC 534 admixture in potable water applications that require the use of NSF Certified products is 30 fl oz/cwt (2.0 L/kg) of cementitious materials. For specialty concrete mixtures such as 4x4 Concrete, dosages up to 100 fl oz/cwt (6.5 L/100 kg) may be required.

Masonry Mortar: The recommended dosage range for use of MasterSet AC 534 admixture in masonry mortar is 12 – 30 fl oz/cwt (0.78 – 1.95 L/100 kg) of masonry cement, depending on the ambient temperature and degree of acceleration desired.

The MasterSet AC 534 admixture should be added directly to the mix water prior to the other mortar ingredients. The mortar should be mixed thoroughly for 2 – 3 minutes and placed before it stiffens excessively. Do not add MasterSet AC 534 admixture directly to the masonry cement.

When temperatures after placement of mortar are expected to be at or below 25 °F (-4 °C) for 24 hours or longer, supplemental protection measures such as artificial heating are recommended in addition to the use of MasterSet AC 534 admixture.

Clean Up: Clean all tools and equipment with water.

Product Notes

Corrosivity – Non-Chloride, Non-Corrosive: MasterSet AC 534 admixture will neither initiate nor promote corrosion of reinforcing steel in concrete.

Compatibility: MasterSet AC 534 admixture may be used in combination with any Master Builders Solutions admixtures. When used in conjunction with other admixtures, each admixture must be dispensed separately into the mixture.

Storage and Handling

Storage Temperature: MasterSet AC 534 admixture should be stored above freezing temperatures. If MasterSet AC 534 admixture freezes, thaw at 35 °F (2 °C) or above and completely reconstitute by mild mechanical agitation. **Do not use pressurized air for agitation.**

Shelf Life: MasterSet AC 534 admixture has a minimum shelf life of 18 months. Depending on storage conditions, the shelf life may be greater than stated. Please contact your local sales representative regarding suitability for use and dosage recommendations if the shelf life of MasterSet AC 534 admixture has been exceeded.

Packaging

This product is supplied in 55 gal (208 L) drums, 275 gal (1040 L) totes and by bulk delivery.

Related Documents

Safety Data Sheets: MasterSet AC 534 admixture

Additional Information

For additional information on MasterSet AC 534 admixture or its use in developing a concrete mixture with special performance characteristics, contact your local sales representative.

Master Builders Solutions creates technologies for the construction industry inspiring people to build better. We are active in ~40 countries and operate 35 production sites with over 1,600 employees. We develop, produce, and market high-quality chemical admixtures, as well as adjacent core technologies, to master the challenges of today and support a decarbonized future. Our people are pivotal and pair leading technologies and a strong brand heritage to surpass our customers' expectations and drive continuous value creation.

Limited Warranty Notice

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