

MasterAir 189

Air entraining admixture for concrete - EN 934-2: T5

DESCRIPTION

MasterAir 189 is an Integral concrete plasticizer and water reducing agent based on lignosulphonate with moderate air entraining properties.

CRD-C87: Types A&D EN934 part 2 table 5. MasterAir 189 meets the requirements of WRC for contact with potable water.

FIELDS OF APPLICATION

- In areas of congested reinforcement where high workability is of benefit.
- In roads, runways, parking aprons to increase durability.
- In concrete brick and block manufacture.
- In mass pours to increase workability.
- For air entrained concrete.
- To increase workability.
- To reduce bleeding in concrete and improve cohesive properties.
- To increase durability and reduce permeability.
- Improves resistance to freeze/thaw attack and the effects of de-icing salts.

FEATURES AND BENEFITS

MasterAir 189 offers the following benefits:

- MasterAir 189 enables air entrainment of approximately 5% into a concrete mix with a workability of 50mm. Its plasticizing action will give an increase in workability thus facilitating a high water reduction in the water content of approximately 10-15%.
- These properties will allow air entrainment in the concrete without loss in strength, which normally would be associated with air entrainment subject to normal mix adjustments.
- Concrete will be less susceptible to bleeding and segregation, especially where being poured or pumped, and will have increased durability and reduced permeability.
- Of particular benefit in crushed aggregate mixes where the improved cohesion of the mix results in minimising sand runs and eliminating bleeding.
- Cohesion of the mix aids pouring and placing of concrete.

- The powerful air entraining agent in MasterAir 189 enables it to entrain controlled amounts of air bubbles of optimum spacing and diameter into the concrete to give high durability under freeze-thaw conditions.

DOSAGE

As with most admixtures, field trials should be conducted to determine the optimum addition rates of MasterAir 189. These trials will be helpful in assessing the correct dosage for desired conditions, such as high early strength and correct degree of air.

As a guide to these trials, the following dosage range is recommended as an initial starting point, although dosages may vary considerably depending on sands and aggregates used.

- *By Volume* - 0.08 to 0.42 litres per 100 kg of cement (binder).
- *By Mass* - 0.10 to 0.50 kg per 100 kg of cement (binder).

The dosage rates given above are for typical usages, they are not meant as absolute limits, as other dosages may be utilised in special cases according to specific job conditions. If required consult our Technical Services Department for advice. Trial mixes should be carried out to ensure optimum dosage and effect.

APPLICATION PROCEDURE

MasterAir 189 should be added to the concrete mix during the mixing cycle at the same time as the water or the aggregates. Never add MasterAir 189 to the dry cement. No extension to normal mixing time is necessary.

COMPATIBILITY

MasterAir 189 can be used with all types of EN 197 Cements. For use with other special cements, contact our Technical Services Department.

MasterAir 189 should not be pre-mixed with other admixtures. If other admixtures are to be used in concrete containing MasterAir 189 they must be dispensed separately.

When complimentary admixtures are required it is important that laboratory trials are performed, prior to any

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supply, to determine the respective dosages of any complimentary admixture, and the suitability, in the fresh and hardened state, of the resultant concrete. In these circumstances we recommend that you consult our Technical Services Department for further advice.

PACKAGING

MasterAir 189 is supplied in 1000-litre IBC's and 15-litre containers.

CONTACT DETAILS

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Product Data	
Appearance:	Dark brown liquid
Specific gravity @ 20°C:	1.18 ± 0.03 g/cm ³
pH-value:	5.0 ± 1
Alkali content (%):	≤ 4.00 by mass
Chloride content (%):	≤ 0.10 by mass
Compressive strength – 28 day	≥ 75% of Reference mix
Air content in fresh concrete	≥ 2.5% by volume of Reference mix & total air content between 4% & 6%
Air void characteristics in hardened concrete	Spacing factor in test mix ≤ 0.200 mm
Chloride content	Max 0.1% by mass
Alkali content	Max 2.0% by mass
Corrosion behaviour	Contains only components according to BS EN 934-1:2008, Annex A.1
Dangerous substances	No Performance Determined
Durability	No Performance Determined
Logistics	
Shelf life:	12 months if stored according to manufacturer's instructions in unopened container.
Storage conditions:	Store in original sealed containers and at temperatures between 5°C and 30°C. Store under cover, out of direct sunlight and protect from extremes of temperature. Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging.
Handling and transportation:	Refer to MasterAir 189 Safety Data Sheet
Disposal:	Refer to MasterAir 189 Safety Data Sheet



0086-CPR-469071



1073-CPR-7420

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 Declaration of Performance can be found at www.master-builders-solutions.com/en-gb

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Health and Safety

*For full information on Health and Safety matters regarding this product the relevant Health and Safety Data Sheet should be consulted.

The following general comments apply to all products.

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs, (which may also be tainted with vapour until the product is fully cured and dried). Treat splashes to eyes and skin immediately. If accidentally ingested, seek medical attention. Keep away from children and animals. Reseal containers after use.

Spillage

Chemical products can cause damage; clean spillage immediately.

DISCLAIMER

"Master Builders Solutions UK Ltd" (the Company) endeavours to ensure that advice and information given in Product Data Sheets, Method Statements and Material Safety Data Sheets (all known as Product Literature) is accurate and correct. However, the Company has no control over the selection of its products for particular applications. It is important that any prospective customer, user or specifier, satisfies him/her-self that the product is suitable for the specific application. In this process, due regard should be taken of the nature and composition of the background/base and the ambient conditions both at the time of laying/applying/installing the material and when the completed work is to be brought into use.

Accordingly, no liability will be accepted by the Company for the selection, by others, of a product, which is inappropriate to a particular application.

Products are sold subject to the Company's standard conditions of sale and all customers, users and specifiers, should ensure that they examine the Company's latest Product Literature.