

MasterAir 160

Air entraining admixture specific for premixed mortars and for concrete.

DESCRIPTION AND WHERE TO USE

MasterAir 160 is an admixture, based on specific surfactants, suitable for the production of ready-mixed mortar with characteristics of high workability (mortar for masonry or plaster).

MasterAir 160 can be advantageously used for the packaging of ready-mixed mortar based on cement even with additions of hydraulic lime.

MasterAir 160 can also be used to prepare normal concretes to increase durability of concrete structures against freeze/thaw cycles damages (exposure classes XF1-4 according to EN 206-1) and concretes with lightweight aggregates. According EN 206-1 the optimum air content must be in the range of 4%.

Concrete durability research has established that the best protection for concrete from the adverse effects of freeze/thaw cycles and de-icing salts results from:

- proper air content in the hardened concrete;
- a suitable air-void system in terms of bubble size and spacing;
- adequate concrete strength, assuming the use of sound aggregates and proper mixing, placing, handling and curing techniques.

MasterAir 160 is free of chloride and meets UNI EN 480 (1-2), ASTM C 260 requirements.

BENEFITS

MasterAir 160, in addition to a premixed aerated mortars mix, gives:

- a constant air content during time with high stability of the mortars in the storage phase (absence of segregation), and without the need to keep them constantly mixed;
- an improved plasticity and workability of fresh mortar.

It also allows to have:

- a strong reduction of waste;
- an increase in execution speed of the walls;
- improved workability, pumpability and surface finish characteristics of the mortar;
- a reduction of the costs of construction.

MasterAir 160 in addition to concrete gives:

- improved stability of air-entrainment;
- durable concrete structures against freeze/thaw cycles damages;
- improved air-void system in hardened concrete;
- reduced segregation and bleeding.

DIRECTIONS FOR USE

- Add MasterAir 160 admixture to the mortar or concrete mix using a dispenser designed for air-entraining admixtures or add manually using a suitable measuring device that ensures accuracy within plus or minus 3% of the required amount.
- Check the air content of the first batch and make further adjustments if needed. Due to possible changes in the factors that affect the dosage rate of MasterAir 160, frequent checks should be made during the course of the work.
- Adjustments to the dosage should be based on the amount of entrained air in the mix at the point of placement.

COMPATIBILITY

We recommend the combined use of MasterAir 160 with one or more of the following items to add to a premixed mortar:

- MasterSet R 200BM to give the workability of mortars up to 48 hours from the time of mixing.

Technical Information	
Form	Liquid
Relative density (g/cc at 20°C)	1.000 – 1.020

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DOSAGE

The recommended amount of MasterAir 160 varies from 1.0 to 2.0 liters per cubic meter of ready-made mortar.

The content of entrained air may be a function of:

- type of binder and lime
- particle size distribution of the aggregates;
- composition of fine materials (mineral filler, cement, natural sands);
- workability;
- type of mixing and transporting concrete.

In order to optimize the content of MasterAir 160, please follow the following methodology:

- a) carry out a preliminary test by taking a dose range of 1.0 to 2.0 liters per cubic meter by controlling the rate of air added according to UNI EN 12350-7 and the density according to EN 12350-6;
- b) may vary the dose until reaching the desired amount of ventilation.
- c) in the case of installation by pumping it is recommended to take a measurement of the value of entrained air of a concrete sample collected at the pump outlet.

In order to meet EN 206-1 requirements (the optimum air content should be in the range of 4%), the recommended dosage rate in a concrete mix is 0.03 - 0.200 litres per 100 kg of binder.

Other dosages may be recommended in special cases according to specific job site conditions. In these cases please consult our Technical Service Department for advice.

PACKAGING AND STORAGE

MasterAir 160 is available in 10 litre cans, 208 litre drums, 1.000 litre containers and bulk.

MasterAir 160 must be stored in a place where the temperature does not drop below 5 °C.

From 16/12/1992 BASF Construction Chemicals Italia Spa operates under the Quality System in compliance with European Standard UNI-EN ISO 9001. The environmental management system of BASF Construction Chemicals Italia Spa is certified accordingly to UNI EN ISO 14001.

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For further information, please consult your local BASF Construction Chemicals Italia Spa representative.

The technical advice on how to use our products, either written or verbally given, are based on the present state of our best scientific and practical knowledge, and no guarantee and/or implicit or explicit responsibility are assumed on final results of works executed by the use of our products.

The owner, his representative, or the contractor is responsible for checking the suitability of our products as to the intended use and aims.

Supersedes all prior issues on this product.

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