

MasterAir I60

Air entraining admixture specific for premixed mortars and for concrete exposed to the aggressive action of freeze-thaw cycles.

Material description

MasterAir I60 is a chloride free admixture, based on specific surfactants, suitable for the production of ready-mixed mortar with characteristics of high workability (mortar for masonry or plaster). MasterAir I60 can be advantageously used for the packaging of ready-mixed mortar based on cement even with additions of hydraulic lime.

Fields of application

MasterAir I60 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 to 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 I60, 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:

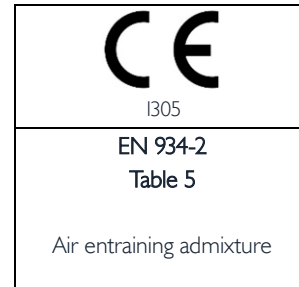
- a strong reduction of waste,
- an increase in execution speed of the walls,
- improved workability, pumpability and surface finish characteristics of the mortar,
- a reduction of the costs of construction.

Features and benefits

MasterAir I60, in addition to a concrete mix, gives:

- an improved stability of air-entrainment,
- a durable concrete structure against freeze/thaw cycles damages,
- an improved air-void system in the hardened concrete,
- a reduction of segregation and bleeding.

In compliance with the European Regulation (EU No 305/2011 and EU No. 574/2014) the product is provided with the CE marking according to UNI EN 934-2 and the relative DoP (Declaration of Performance).



Dosage

The recommended amount of MasterAir I60 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 I60, please follow the following methodology:

- 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

MasterAir 160

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according to UNI EN 12350-7 and the density according to EN 12350-6,

- may vary the dose until reaching the desired amount of ventilation,
- 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 0.030 - 0.200 liters 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

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

Storage

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

Technical Information	
Form	Liquid
Relative density (g/cc at 20°C)	1.100 - 1.020
Essential characteristic in accordance to EN 934-2	Performance
Chloride ion content	≤ 0.1% by mass
Alkali content (Na ₂ O equivalent)	≤ 2.0%
Corrosion behaviour	Contains only components from EN 934-1 2008 Annex I
Compressive strength	28 days ≥ 75%
Air content (entrained air)	Comply 5
Air void characteristic	≤ 0.2 mm

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



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- Superplasticizer from MasterGlenium, MasterEase, MasteCO2re line to prepare a durable concrete, following exposure classes XF1-4, according to EN 206-1.

Safety instruction

Avoid contact with eyes and prolonged contact with skin. If contact occurs, wash thoroughly with water and seek medical advice.

For further information refer to the product Material Safety Data Sheet.

Other services

For additional technical information, brochures, references, technical reports and technical support please visit www.master-builders-solutions.com/it-it or alternatively contact infomac@masterbuilders.com.

Scan QR code to visit the product page and download the latest version of this technical data sheet and any additional documentation.



Disclaimer

Since 16/12/1992, Master Builders Solutions Italia Spa has been operating under a Certified Quality System compliant with the UNI EN ISO 9001 Standard. Furthermore, the Environmental Management System is certified according to the UNI EN ISO 14001 Standard and the Safety Management System is certified according to the UNI ISO 45001 Standard.

For further information, please consult the local Technician of Master Builders Solutions. The technical advice on how to use our products, either written or verbally given, are based on the current state of our scientific and practical expertise, and does not imply the assumption of any guarantee and/or responsibility for the final results of works executed using our products.

Therefore, the customer is not exempted from the exclusive task and responsibility of verifying the suitability of our products for the intended use and purposes.

This version supersedes all the previous ones.

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