

MasterSure EW I290

High Range Water Reducing/Superplasticizing admixture for concrete with extreme extended consistence retention.

Material description

MasterSure EW I290 is a high range water reducer/superplasticizing admixture, with progressive release, based on latest generation of polycarboxylate ethers, which allows and extreme extended consistence retention, without delaying the development of compressive strengths at early curing ages.

Fields of application

MasterSure EW I290 has been specifically designed for the production of concrete having requirements of very high workability retention. MasterSure EW I290 must be dosed according to the required workability maintenance, the temperature of use, and the long transport times required in specific concrete prescriptions.

MasterSure EW I290 is recommended for summer climates, but can still be used in any season as its addition does not influence the development of compressive strengths at early curing ages.

MasterSure EW I290 is chloride free, meets EN 934-2, and it is compatible with all cements meeting the EN 197-1 standards. Recommended for mixtures containing difficult sands and aggregates and low clinker cements, according to UNI EN 197-5 and 197-6.

The chemistry of MasterSure EW

The MasterSure EW (Extreme Workability) family of products is based on innovative "slow release" polymers designed in the research laboratories and patented by Master Builders Solutions. The polymers inside MasterSure EW are not immediately active, but are gradually absorbed over time into the binder particles, as the first hydration products form.

This unique property of MasterSure EW I290 allows for tailor-made adjustment to maintain the workability of the concrete, without any delay in setting and hardening.

Benefits for ready-mix producer

MasterSure EW I290 offers at the ready-mix producer the confidence that the workability will be the same at the job site as it was when first produced, with no requirement of retempering with water or admixture at job site.

The use of MasterSure EW I290 is strongly advised for the requirement of an extended period of workability, e.g. long distance deliveries, deliveries with extended discharge times, extended placing scenarios such as deep piling operations where the reinforcing cage is introduced at the end of concreting operations, or in congested urban environments.

MasterSure EW I290 can be used to make the following types of concrete:

- Ready mix concrete following UNI EN 206 and UNI 11104 standards;
- Long pumping distances both horizontally and vertically;
- Self compacting concrete;
- High quality concrete with better durability.

Compatibility

In order to optimise some special properties of the concrete, use of the following complementary admixtures is suggested:

- air entraining agent MasterAir to improve freeze thaw resistance (exposure class XF1 to XF4, EN 206);
- silica fume, MasterLife MS 610, for high performance concrete and to improve the durability in chemical aggressive environments (exposure class XA1 to XA3, EN 206);
- synthetic micro-fibres MasterFiber to prevent cracks due to plastic shrinkage;
- curing agent MasterKure for sealing the surface of freshly finished concrete against rapid evaporation of water which may cause plastic shrinkage cracking;
- demoulding agent MasterFinish for good surface appearance.

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Dosage

The dosage of MasterSure EW I290 can be modulate as a function of the required workability retention and the external climate conditions.

The advised dosage for MasterSure EW I290 is from 0,8 to 1,4 liters per 100 kg of binder.

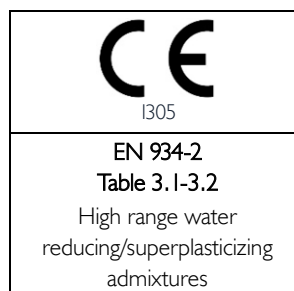
Other dosages may be recommended in special cases according to specific job site conditions. In such cases please consult our Technical Service Department for advice.

Directions for use

MasterSure EW I290 is a liquid admixture to be added to the concrete during the mixing process:

- mix cement and secondary binders, sand, coarse aggregates and the mix water until a stiff, yet homogeneous, mixture is obtained,
- optimal mixing water reduction is obtained if MasterSure EW I290 is mixed into the concrete right after the addition of the initial 80-90% of the total water,
- avoid adding the admixture to the dry aggregates,
- add MasterSure EW I290 admixture and mix again for to 60 seconds in order to disperse it homogeneously,
- continue mixing until required workability is obtained, with addition of the remaining water.

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).



Packaging and storage

MasterSure EW I290 is available in 1.000L tanks or in bulk. Samples are available in 10L cans.

MasterSure EW I290 must be stored in a place where the temperature does not drop below 5 °C. In case of freezing, warm up and homogenise the admixture solution before using.

Please consult our Technical Service Department for advice.

Technical Information	
Form	Liquid
Relative density (g/cc at 20°C)	1.057 – 1.097
Essential characteristic in accordance to EN 934-2	
Chloride ion content	≤ 0.1 % by mass
Alkali content (Na ₂ O equivalent)	≤ 3.0%
Corrosion behaviour	Contains component only from EN 934-1: 2008 Annex A.1
Compressive strength	7 gg ≥ 110% 28 gg ≥ 110%
Air content	≤ 1.5 %
Water reduction	≥ 12 %

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Compatibility

MasterSure EW I290 is not compatible with all admixtures of MasterRheobuild series.

Safety information

For information on the correct and safe use, transport, storage and disposal of the product, consult the most recent 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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