

MasterGlenium 123

High range water reducing admixture for concrete – BS EN / EN 934-2: T3.1 & T3.2

Material Description

MasterGlenium 123 is an innovative versatile admixture based on third generation polycarboxylic ether (PCE) polymers. MasterGlenium 123 is specially engineered for the ready-mix concrete market to replace both a lignosulphonate based water reducer and a superplasticizer. Its configuration allows it to perform as a multi-functional admixture; it is possible to obtain a high quality concrete mix with good strength development and extended workability without delayed setting characteristics.

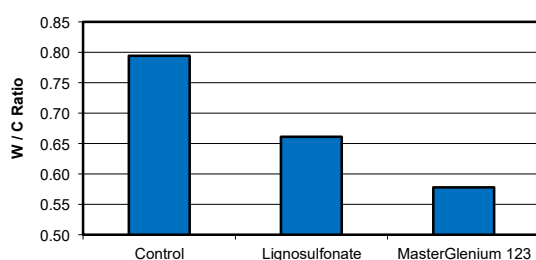
The Total Performance Control™ concept ensures that readymix producers, contractors and engineers get a concrete that is of the same high quality as originally specified; starting from production at the batching plant, to the delivery and application into place, and followed by its hardening process. Utilizing Rheodynamic™ concrete technology it provides a concrete mix with exceptional placing characteristics.

Fields of Application

What MasterGlenium 123 is used for the production of all grades from high quality to low specification ready-mix concrete.

MasterGlenium 123 may be used in combination with MasterMatrix admixtures for producing Rheodynamic™ concrete, capable of self-compaction, even in the presence of dense reinforcement.

W/C Ratio Comparisons @ 1% Dosage @ S4 (180 slump)



Characteristics and Benefits

MasterGlenium 123 offers the following benefits for:

The Ready-mix Producer:

- Capability of delivering high quality concrete at any time to the job site in place.
- Production of a concrete with low water cement ratio that meets EN 206-1 without loss of workability.
- Single product for most applications from everyday water reducing to Self-compacting Concrete.

The Contractor / Applicator:

- Easier placing.
- Improved concrete surfaces.
- Guarantee to place the same concrete as specified and ordered from ready-mix plant.
- More versatile and forgiving concrete mix.

The Engineer:

- Insurance that concrete meets original specification.
- High quality concrete with better durability

Dosage

The normally recommended dosage rate of MasterGlenium 123 is approximately:

- *By Volume* - 0.18 to 0.88 litres per 100 kg of cement (binder).
- *By Weight* - 0.20 to 1.00 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. Where the concrete is to be machine finished by utilising power float or power trowelling methods, we recommend that you contact the Technical Services Department for dosage rate guidance.

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Mixing

MasterGlenium 123 is a ready-to-use admixture to be added to the concrete as a separate component.

Optimal performance is obtained if MasterGlenium 123 is dispensed into the concrete mix right after the addition of the first 80% of the mixing water, i.e. when all solids are wetted out. Avoid adding the admixture to the dry aggregates.

Effects of Overdosing

The detrimental effects of an overdose of MasterGlenium 123 will depend upon the magnitude of the overdose in that an increase in initial setting time will occur. Provided the concrete is protected and cured, this will not necessarily result in any reduction in 28 day strength. The consistence (slump) of the concrete will be increased or the concrete will have a lower water content than the original mix design due to the additional plasticizing effects of the overdose. In addition to this there may be an increase in air entrainment.

Air Entrainment

Within the recommended dosage range, the use of MasterGlenium 123 will not entrain air in excess of the requirements of BS EN 934-2, Tables 2, 3.1 & 3.2.

Compatibility

MasterGlenium 123 can be used with all types of EN 197 Cements. For use with other special cements, contact our Technical Services Department.

MasterGlenium 123 should not be pre-mixed with other admixtures. If other admixtures are to be used in concrete containing MasterGlenium 123 they must be dispensed separately.

MasterGlenium 123 is not compatible with MasterRheobuild superplasticizers. In order to optimize special requirements the use of the following complementary additives is suggested:

- Viscosity modifying agent MasterMatrix to produce Rheodynamic™ concrete
- Air entraining agent MasterAir to improve frost/thaw resistance

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

MasterGlenium 123 is supplied in Bulk, 1000-litre IBC's and 15-litre containers.

MasterGlenium I23

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Product Data	
Appearance:	Brown liquid
Specific gravity @ 20°C:	1.13 ± 0.03 g/cm ³
pH-value:	5.5 ± 1
Alkali content (%):	≤ 1.00 by mass
Chloride content (%):	≤ 0.10 by mass
Corrosion behaviour:	Contains only components according to BS EN 934-1:2008, Annex A.1
Air Content:	Fulfilled
Water reduction:	≥ 112% of Reference mix
Increase in consistence:	Increase of ≥ 120mm from initial slump or ≥ 160mm from initial flow
Retention of consistence:	At 30 mins ≥ Reference mix at initial
Compressive strength:	Fulfilled
Durability:	NPD
Dangerous substances:	NPD
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 MasterGlenium I23 Safety Data Sheet
Disposal:	Refer to MasterGlenium I23 Safety Data Sheet

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DISCLAIMER

MasterGlenium I23, Master Builders Solutions UK Ltd, Version 7

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.

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

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

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