

MasterEase 3820

High Range Water Reducing Admixture, with Enhanced Rheological Performance - EN 934-2: T3.2

Material Description

MasterEase 3820 is an innovative superplasticizer based on a unique blend of state of the art polymers. It is the next step of the Total Performance Control™ concept. MasterEase 3820 is specially engineered for ready-mix concrete. Its particular configuration allows its delayed adsorption onto the cement particles and disperses them efficiently.

With MasterEase 3820 it is now possible to obtain a high-quality concrete mix with accelerated strength development, extended workability without delayed setting characteristics and superior concrete rheology. The unique polymer formulation enables true workability retention to be achieved across a broad spectrum of consistence classes (S3 to SF3). This is achieved without set retardation or reduced 24-hour strength performance.

Total Performance Control

The Total Performance Control™ concept ensures that ready-mix 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 and accelerated cement hydration for early strength development and high-quality concrete.

Areas of Application

MasterEase 3820 is especially beneficial for the production of high quality ready-mix concrete particularly when high water reductions are required in combination with a requirement for an extended period of workability e.g. long-distance deliveries or deliveries with extended discharge times. MasterEase 3820 is designed to exhibit workability retention for periods up to 3 hours. The enhanced rheology of the resultant concrete allows low water cement ratios to be achieved without the traditionally accepted increased levels of stickiness. This is particularly beneficial in areas of heavily congested reinforcement.

Characteristics and Benefits

MasterEase 3820 offers the following benefits for:

The ready-mix producer:

- Production of a concrete with low water cement ratio that meets EN 206-1 without loss of workability or an increase in concrete stickiness.
- Single product for many application needs.
- Enhanced retention performance with cements containing either GGBS or PFA
- Confidence that the workability will be the same at the job site as it was when first produced.

The contractor / applicator:

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

The engineer:

- Insurance that concrete meets original specification
- Confidence in the concrete's ability to be placed in areas of congested reinforcement.
- High quality concrete with better durability.

Dosage

MasterEase 3820 is particularly suited for mixes where higher strengths/low water cement ratios are required without significant workability reduction over a 3-hour period. Although MasterEase 3820 is designed to work on its own it can be used in conjunction with MasterGlenium SKY 950 if enhanced retention performance is required.

The normally recommended dosage rate of MasterEase 3820 is approximately:

- *By Volume* - 0.3 to 2.00 litres per 100 kg of cement (binder).
- *By Mass* - 0.32 to 2.16 kg per 100 kg of cement (binder).

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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.

Mixing

MasterEase 3820 is a ready-to-use admixture to be added to the concrete as a separate component. Optimal results are obtained if MasterEase 3820 is dispensed into the concrete mix 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 and cement.

Compatibility

MasterEase 3820 can be used with all types of EN 197 Cements. For use with other special cements, contact our Technical Services Department.

MasterEase 3820 should not be pre-mixed with other admixtures. If other admixtures are to be used in concrete containing MasterEase 3820 they must be dispensed separately.

In order to optimize special requirements, the use of the following complementary additives is suggested:

- By Viscosity modifying agent MasterMatrix to produce Smart Dynamic Concrete or Self Compacting Concrete.
- Air entraining agent MasterAir to improve frost/thaw resistance.
- MasterSure SKY 1970 for further retention performance.

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

MasterEase 3820 is supplied in Bulk, 1000-litre IBC's and 15-litre containers.

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Product Data	
Appearance:	Beige/milky white
Specific gravity @ 20°C:	1.08 ± 0.02 g/cm ³
pH-value:	7.0 ± 1
Alkali content (%):	≤ 1.50 by mass
Chloride content (%):	≤ 0.10 by mass
Total Chlorine content (%):	1.0
Sulphate (SO ₃ %):	≤ 0.10
Sulphide (mg/l):	≤ 0.10
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 MasterEase 3820 Safety Data Sheet
Disposal:	Refer to MasterEase 3820 Safety Data Sheet

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DISCLAIMER

MasterEase 3820, Master Builders Solutions UK Ltd, Version 9

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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