



UltraMatrix 120

Next generation superplasticizer for the production of high-quality ready-mix concrete

PACKAGING

UltraMatrix 120 is supplied in 210 L drums, 1,000 L containers or in bulk.

STANDARDS

ASTM C-494 Type D&G
BS EN 934-2

STORAGE AND SHELF LIFE

UltraMatrix 120 should be stored in unopened containers or bulk tanks so as to protect from extremes of temperature. The shelf life is 12 months when stored as above. The occurrence of a surface layer with UltraMatrix 120 is normal and will have no effect on the performance of the product.

DESCRIPTION

UltraMatrix 120 is part of a range of latest generation superplasticizers formulated from unique polymers manufactured in-house by Gulf Additive Factory. It is specially engineered for ready-mix concrete and civil engineering construction sites.

UltraMatrix 120 is differentiated from conventional superplasticisers, such as those based on sulphonated naphthalene formaldehyde condensate in that it is based on unique polymers with long lateral chains. This greatly improves cement dispersion. At the start of the mixing process the same electrostatic dispersion occurs but the presence of the lateral chains, linked to the polymer backbone, generate a steric hindrance which stabilises the cement particles capacity to separate and disperse.

This mechanism provides flowable concrete with greatly reduced water demand.

TYPICAL APPLICATIONS

UltraMatrix 120 is used for the production of high-quality ready-mix concrete to improve to cementitious material performance, high workability and high strength characteristics are desirable.

ADVANTAGES

The ready-mix producer:

- Capability of delivering high performance concrete at any time to the job site in place
- Improve compressive strength at all ages
- Production of a concrete with low water cement ratios with excellent workability retention properties
- Single product for many applications needs

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

The engineer:

- Insurance that concretes meet original specification
- High quality durable concrete

TYPICAL PROPERTIES

Appearance	Light to dark brown liquid
Specific gravity @ 25°C	1.05 - 1.08
pH value	4.0 - 7.0
Chloride content	"Chloride-free" to EN 934



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APPLICATION GUIDELINES

The normally recommended dosage rate of **UltraMatrix 120** is 0.80 - 2.00 L/100kg of total cementitious material.

Other dosages may be recommended in special cases according to the specific site conditions. In this case, please consult our Technical Services Department for advice.

OVERDOSING

An overdose of double the required amount of ULTRAMATRIX 120 will result in a significant increase in retardation. Provided that adequate curing is maintained the ultimate strength of the concrete will usually be increase.

MIXING

UltraMatrix 120 is a ready-to-use admixture to be added to the concrete as a separate component. Optimal result is obtained if **UltraMatrix 120** is poured into the concrete mix right after the addition of the first 80% of the mixing water, i.e., when all solids are wetted. Avoid adding the admixture to the dry aggregates.

UltraMatrix 120 is suitable for mixes containing all types of cement and supplementary cementitious materials such as:

- Microsilica (Silica Fume)
- Fly Ash (PFA)
- GGBS (ground granulated blast furnace slag)

Note: For additional information please contact our local GAF representative.

HANDLING AND TRANSPORTATION

No special requirements must be observed during use. Protection gloves and glasses are however recommended. **UltraMatrix 120** is nonflammable, non-toxic, or irritant and is not subject to special transport requirements.

HEALTH AND SAFETY

UltraMatrix 120 contains no hazardous substances requiring labelling. For further information refer to the Material Safety Data Sheet (MSDS) prior to the use of this products.

QUALITY AND CARE

All products originating from Gulf Additive Factory, Qatar facility are manufactured under a management system independently certified to conform to the requirements of the quality, environmental and occupational health & safety standard ISO 9001 and ISO 14001.

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NOTE: Field service where provided does not constitute supervisory responsibility. Suggestions made by GAF either orally or in writing may be followed, modified, or rejected by the owner, engineer, or contractor since they, and not GAF are responsible for carrying out procedures appropriate to a specific application.

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