



KEM SUPLAST 128 UT

High-Range, Retarding Superplasticiser For High Performance Concrete Mixes

Ref. CA/SP-V1-0112

Description

KEM Suplast 128 UT is composed of synthetic polymers specially designed to allow considerable reduction of mixing water while maintaining control on extend of set retardation.

KEM Suplast 128 UT is preferred admixture for triple blend binder system based High Performance Concrete (HPC) mixes or mixes containing micro silica or metakaolin. It is chloride free.

Uses

- Concrete containing Silica fume/ Metakaolin.
- Ready mixed concrete.
- Congested/complex reinforced sections.
- Pre-cast concrete production
- Long-distance transporting.
- Pumped concrete.
- Low water/binder ratio mixes.
- Mixes requiring >20% water reductions.

Advantages

- Good dispersion even in mixes with high fines.
- Reduced thermal peaks.
- High workability for longer periods.
- Lower pumping pressure.
- Resistance to segregation even at high workability.
- Extended setting with longer workability.
- Reduced water content for a given workability.
- Higher ultimate strengths.

- Reduced permeability.
- Improved durability.
- Reduced shrinkage and creep.
- Increased ease in finishing concrete.

Typical Properties

Appearance : Dark brown free flowing liquid.

Relative Density : $1.25 \pm 0.02@25^{\circ}\text{C}$.

pH : 6.

Chloride ion content: < 0.2%.

Standards

KEM Suplast 128 UT meets/exceeds the requirements as per ASTM C-494 Type G

EN 934-2: T11.1/11.2

IS 9103.

Specification Clause

The high-range, retarding, Superplasticising admixture for concrete shall be KEM Suplast 128 UT, a sulphonated naphthalene polymer based formulation having slump retaining capabilities. The product shall comply with IS:9103 and shall be of type G when tested to ASTM C-494. The product shall have average relative density of 1.26 at 25°C.

Direction for use

It is a ready-to-use liquid which is dispensed into the concrete together with the mixing water. The plasticizing effect and water reduction are higher if the admixture is added to the damp concrete after 50 to 70% of the mixing water has been added. The addition of KEM Suplast 128 UT to dry aggregate or cement is not recommended.

Dosage

Optimum dosage of KEM Suplast 128 UT should be determined with trial mixes. As a guide, a dosage range of 600ml to 1800ml per 100kg of cementitious material is normally recommended. Because of variations in concrete materials, job site conditions, and/or applications, dosages outside of the recommended range may be required.



Effects of over dosage

A severe over-dosage of KEM Suplast 128 UT can result in the following:

- Long extension of initial and final set.
- Increase in air entrainment.
- Bleed/segregation of mix, quick loss of workability.
- Increased plastic shrinkage.

A slight overdosing may not adversely affect the ultimate strength of the concrete and can achieve higher strengths than normal concrete, provided it is properly compacted and cured. Due allowance should be made for the effect of fluid concrete pressure on form work, and stripping times should be monitored.

Compatibility

It is compatible with most admixtures used in the production of quality concrete including normal, other mid-range and high-range water-reducing admixtures, air entrainers, accelerators, retarders, extended set-control admixtures, corrosion inhibitors, and shrinkage reducers.

KEM Suplast 128 UT is also compatible with slag and pozzolans such as fly ash, metakaolin and silica fume.

Corrosivity – Non Corrosive

KEM Suplast 128 UT admixture will neither initiate nor promote corrosion of reinforcing steel embedded in concrete, prestressed concrete or concrete placed on galvanized steel floor and roof systems. Neither calcium chloride nor any calcium chloride-based ingredients are used in the manufacture of KEM Suplast 128 UT admixture. In all concrete application, KEM Suplast 128 UT admixture will conform to the most stringent or minimum chloride ion limits currently suggested by construction industry standards and practices.

Workability

KEM Suplast 128 UT ensures that rheoplastic concrete remains workable in excess of 3 hours at +25°C. Workability loss is dependent on temperature, and on the type of cement, the nature of aggregates, the method of transport and initial workability. It is strongly recommended that

concrete should be properly cured particularly in hot, windy and dry climates.

Packaging

It is supplied in 250 kg drums or in bulk on request.

Storage and Shelf life

KEM Suplast 128 UT must be stored where temperatures do not drop below +5°C. If product has frozen, thaw at +5°C or above and completely reconstitute using mild mechanical agitation. Do not use pressurized air for agitation. Store under cover, out of direct sunlight and protect from extremes of temperature.

Shelf life is 12 months from manufacture if stores in original, unopened bags.

Technical Service

Chembond has established itself in various fields on the basis of its dependable technical service. For this purpose, we maintain a well equipped laboratory for research & quality assurance of all products. Our experienced personnel are always on call and would always be available for product demonstrations and product performance monitoring.

Safety precautions

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs (which can also be tainted with vapour until product fully cured or dried). Treat splashes to eyes and skin immediately. If accidentally ingested, seek immediate medical attention. Keep away from children and animals. Reseal containers after use. Do not reuse containers for storage of consumable item. For further information refer to the material safety data sheet.

Note

All Chembond Technical Data Sheets are updated on regular basis; it is the user's responsibility, to obtain the most recent issue. Field services where provided, does not constitute supervisory responsibility.

**Chembond Chemicals Limited**

Chembond Centre, EL-71, MIDC,
Mahape, Navi Mumbai, India 400 710.
Tel.: +91 22 3921 3000 , Fax: +91 22 39213100
website: www.chembondindia.com
e-mail: enquiries.conschem@chembondindia.com

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