



Very
High
Durability
Reinforced
Concretes



Certified Quality System since **FEBRUARY 1993**

From Project to Jobsite

TECNOS® 98

SUPERPLASTISIZER FOR CONCRETE FOR APPLICATIONS IN COLD CLIMATE

**CE approved – Certificate n. 1305 - CPD - 0017
EN 934-2 T3.1/T3.2**

Description TECNOS® 98 is based on organic polymers, especially studied to produce concrete with high fluidity and very low water / cement ratio.
With this superplasticizer it is also possible to produce concrete with normal consistency, but with low water / cement ratio, resulting in far better mechanical resistances.
The product is particularly recommended for applications in cold climates.

Advantages *With the same water / cement ratio :*
The workability, measured with the Abrams cone, changes from a plastic consistency (slump 0-5 cm) to a concrete with self levelling properties (slump >18 cm). This characteristic has many advantages :

- reduction in placing time of the concrete, elimination or reduction of the time needed to vibrate the concrete, easier and more affective application of the concrete in difficult areas or heavy armed constructions.
- Reduced 'bleeding' on the concrete, despite the very fluid consistency
- Serious increase of mechanical resistance compared to concrete with the same fluidity. Similar mechanical properties are obtained with TECNOS® 98 with a very fluid concrete (slump >20 cm) as to a normal concrete (slump 1-4 cm) without additives.
- The mechanical resistance, more specially the characteristics of the ageing concrete shall be more constant because the poured concrete is more homogenous in quality (reductions or absence of segregation)

With the same workability :

The required water to obtain a concrete with good workability shall strongly be reduced when adding TECNOS® 98. Comparable workability with un-modified concrete can be obtained using 25 to 30 % less water than normal . The advantages :

- increased mechanical resistances up to from 70 to 250 % on short term, and 50-100 % on medium term. The increased properties remain constant in time.
- reduced hardening time, for normal or forced curing concrete which benefits the uniformity of the poured concrete slabs or prefab elements. .
- the reduction of the water/cement ratio leads to a more compact concrete and with higher impermeability, a few hundred times better in impermeability in comparison with unmodified concrete.

The concrete modified with TECNOS® 98 shall have better resistance to chemical attacks (sulphate water, sea water,..), to freeze/thaw cycling, to abrasion, and better adhesion to the metal reinforcement.

Indicated use TECNOS® 98 is studied to perform optimally with in general all type of concrete applications such as prefabrication, ready-mix, and for high strength concrete.
For demoulding without problems, the demoulding oils BH4, BH10 are most recommended.



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- Method of use** TECNOS[®] 98 is a liquid, which is supplied ready for use, and can be added during the initial phase of the mixing of the concrete, together with the water, or in a later phase when the concrete is already slightly wet, a few minutes before the pouring. Make sure that the additive is mixed for a few moment well for full homogenisation optimal performance.
- Remarks** Keep away from frost.
- Packaging** Available in bulk
Can of 25 Kg.
Drum of 250 Kg.
IBC of 1100 Kg.
- Storage** Can be kept for 1 year in the original and closed packaging, stored between +1 and + 35 °C
- Dosage** 0,8-2,5 kg TECNOS[®] 98 for 100 kg cement, depending on the special conditions of the application and the desired results.
- Workability time** TECNOS[®] 98 allows a constant viscosity or workability of the concrete mixing, transportation and pouring. In case of summer time, or far transportation, it is advisable to add PLASTARD[®] 18 in order to extend the workability time. The dosage is about 0,1% ref. on the cement, but must be verified on site, and in the specific conditions.
- Specifications** TECNOS[®] 98 meets the essential requirements according to EN 934-2 Normative, Classification T 3.1/T 3.2 according to CE marking for Concrete Admixtures. Furthermore, its own performances meet and exceed the limits imposed by all the specifications concerning the concrete technology.
- Compatibility with cement** TECNOS[®] 98 can be used with most common types of cement like Portland, Pozzolanic or Blast furnace, available on the market.
- Compatibility with other admixtures** TECNOS[®] 98 is compatible with following Tecnochem products : Mucis[®] ad 19 L, MICROBETON[®] POZ, CEMEX M-1000, XARLON[®]. When a combination of product is used, this must be evaluated first. Our Technical Department is always available in assisting to establish the mix- design for special concretes.
- Precautions** Store the product above 0°C. In case it is frozen, warm up and mix till it is homogeneous again, and returned to the normal condition.
- Safety indication** Read carefully the safety indications on the packaging, or consult the relevant Material Safety Data Sheet of this product.

The above information is based on our best experiences and lab results and on results of the application of the product in various fields. Tecnochem Italiana is not responsible for negative performances due to not proper use of the product or for defects due to elements not connected with the quality of the product included wrong storage. Technical characteristic in this technical data sheet are up-to-dated periodically .Revision date of this technical data sheet is indicated below.

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