

# Chronos VF 202

## Polymer-based superplasticizing admixture for ready-mix concrete

### DESCRIPTION

**Chronos VF 202** is a polymer-based admixture, developed specifically for the ready-mix concrete market, and in cases where concrete must be transported over long distances, even in hot weather, without having to resort to retardants.

**Chronos** technology was developed in MAPEI's own research laboratories, and integrates the characteristics of traditional acrylic superplasticizers with the innovative and revolutionary technology of these new polymers. The combination of these effects provokes the progressive activation of **Chronos VF 202** within the cementitious conglomerate, so that the loss of workability is continuously compensated for by the "release" of the special functional groups present in the polymers.

### WHERE TO USE

The performance of **Chronos VF 202** makes it particularly suitable for making ready-mix concrete which, because of its production cycle and/or distance from the mixing plant to the site, requires its workability to be maintained for more than one hour, even in hot weather, and without delays in setting. Thanks to the progressive release of the

product, **Chronos VF 202** does not contain setting retardants and, therefore, has no negative effect on mechanical properties after short curing times.

**Chronos VF 202** is particularly recommended for the production of ready-mix concrete:

- with high transport times, including those higher than two hours, in which the consistency class must remain stable without adding water;
- in hot climates, including temperatures higher than +30°C;
- for waterproof, durable applications according to exposure classes contained in EN 206-1 Standards;
- in  $R_{ck}$  25-45 N/mm<sup>2</sup> strength class.

### TECHNICAL CHARACTERISTICS

**Chronos VF 202** is a water solution of polymers, developed and formulated by MAPEI laboratories. It has the property of dispersing the cement granules to produce high quality concrete, with high mechanical strength and durability.

## TECHNICAL DATA (typical values)

### PRODUCT IDENTITY

<b>Consistency:</b>	liquid
<b>Colour:</b>	amber
<b>Density according to ISO 758 (g/cm<sup>3</sup>):</b>	1.10 ± 0.02 at +20°C
<b>Main action:</b>	increase in workability and/or reduction of mixing water, extremely long conservation of workability
<b>Classification according to EN 934-2:</b>	set-delaying compound, high-efficiency water reducing, superplasticizer, tables 11.1 and 11.2
<b>Classification according to ASTM C494:</b>	Type G
<b>Classification according to ASTM C1017:</b>	Type II
<b>Chlorides soluble in water according to EN 480-10 (%):</b>	< 0.1 (absent according to EN 934-2)
<b>Alkali content (Na<sub>2</sub>O equivalent) according to EN 480-12 (%):</b>	< 2.0
<b>pH according to ISO 4316:</b>	6.0 ± 1

### COMPATIBILITY WITH OTHER PRODUCTS

**Chronos VF 202** is compatible with other admixtures used in the production of high-quality concrete, and especially with:

- chlorides-free, hardening accelerating admixtures from the **Mapefast** range to reach high mechanical strength after short curing times, even in cold weather;
- **Mapeplast SF**, micro-silica-based powder, used in the production of “top-quality” concrete with high mechanical strength and waterproofing and durability properties;
- **Mapecure SRA 25**, shrinkage-reducing admixture and **Expancrete** expanding agent, used in the production of concrete with **Mapecrete System**;
- form-release compounds from the **Mapeform Eco** and **DMA**, used for stripping formwork from concrete;
- curing agents from the **Mapecure** range for protection against rapid evaporation of the blending water in concrete structures without formwork;

- air-entraining agents from the **Mapeair AE** range, used in the production of concrete resistant to freeze/thaw cycles.

### HOW TO USE

Add **Chronos VF 202** into the cement mixer after all the other ingredients (water, cement and aggregates). Mix until a homogenous mix is obtained.

### RECOMMENDATIONS

The products in the **Chronos** range must not be used to produce concrete for industrial floors.

### CONSUMPTION

#### Dosage by volume:

from 0.6 to 1.2 l per 100 kg of cement. Different dosages from those suggested must be previously tested through concrete trials, in addition to consulting MAPEI Technical Services Department.

### PACKAGING

**Chronos VF 202** is available in either bulk quantities, in 200 l drums or 1000 l tanks.

### STORAGE

**Chronos VF 202** can be stored for

12 months in sealed containers and protect from frost. While the product may change colour if exposed to direct sunlight, its performance properties will remain unchanged.

### **SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION**

**Chronos VF 202** is not considered hazardous according to current norms regarding the classification of mixtures. It is recommended to use safety goggles and gloves and to take the usual precautions for handling of chemicals. For further and complete information about the safe use of our product please refer to the latest version of our Safety Data Sheet.

PRODUCT FOR PROFESSIONAL USE.

### **WARNING**

*Although the technical details and recommendations contained in this product data sheet correspond to the best of our knowledge and experience, all the above information must, in every case, be taken as merely indicative and subject to confirmation after long-term practical application; for this reason,*

*anyone who intends to use the product must ensure beforehand that it is suitable for the envisaged application. In every case, the user alone is fully responsible for any consequences deriving from the use of the product.*

**Please refer to the current version of the Technical Data Sheet, available from our website [www.mapei.com](http://www.mapei.com)**

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**All relevant references  
for the product are available  
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**Chronos  
VF 202**



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