

Dynamon SR3

Superplasticizer based on acrylic polymer for ready-mixed concrete with long slump retention

DESCRIPTION

Dynamon SR3 is an admixture based on an acrylic polymer designed specifically for the ready-mixed concrete industry, belonging to the MAPEI **Dynamon SR** system.

WHERE TO USE

Concretes manufactured with **Dynamon SR3** have a high level of workability (consistency class S4 or S5, according to EN 206-1), and are consequently easy to apply when fresh. At the same time they offer excellent mechanical performances when hardened.

Dynamon SR3 is particularly suitable for ready-mixed concrete and wherever there is the need for a strong water reduction, along with different consistency classes and with long slump retention.

Its performances make it particularly suitable for manufacturing self-compacting concretes since **Dynamon SR3** can ensure high workability and, at the same time, it does not reduce the concrete mechanical strengths at early age.

The main applications of **Dynamon SR3** are the production of ready-mixed concrete:

- with high mechanical strengths and long slump retention;
- with strength class R_{ck} 25-50 N/mm²;
- designed for waterproof and long lasting works in the exposure classes according to EN 206-1;
- self-compacting concretes. Together with viscosity modifying admixtures from **Viscofluid** and **Viscostar** ranges, **Dynamon SR3** is suitable for manufacturing self-compacting concretes which can be poured without vibration. Its characteristics of

fluidity and resistance to segregation are also suitable for a fast casting procedure.

TECHNICAL CHARACTERISTICS

Dynamon SR3 consists of a water solution containing acrylic polymers (with no formaldehyde). The polymers can efficiently disperse the cement grains and they can facilitate a slow development of hydration products within the concrete.

APPLICATION PROCEDURE

Dynamon SR3 develops maximum dispersing action when added after the other mixture ingredients (cement, aggregates, mineral addition or filler and at least 80% mixing water).

COMPATIBILITY WITH OTHER PRODUCTS

Dynamon SR3 admixture is compatible with other products for preparing special concretes, especially with:

- viscosity modifying admixtures from **Viscofluid** and **Viscostar** ranges, for manufacturing self-compacting concretes;
- hardening accelerating admixtures from the **Mapefast** range to achieve very high mechanical strength, including after short curing cycles;
- air entraining agents from the **Mapeair AE** range used in the production of concrete resistant to freeze/thaw cycles;
- **Mapeplast SF**, silica fume based powder admixture for manufacturing “top-quality” concrete (strength, impermeability, durability);
- **Expacrete**, expansive agent for manufacturing shrinkage compensated concrete;

| TECHNICAL DATA (typical values) | |
|---|---|
| PRODUCT IDENTITY | |
| Consistency: | liquid |
| Colour: | amber |
| Density according to ISO 758 (g/cm ³): | 1.07 ± 0.02 at +20°C |
| Main action: | increase workability and/or reduction of mixing water and slump retention over long periods |
| Classification according to EN 934-2: | set retarding, high range water reducing, superplasticizer, tables 11.1 and 11.2 |
| Classification according to ASTM C494: | type G |
| Classification according to ASTM C1017: | type II |
| Chlorides soluble in water according to EN 480-10 (%): | < 0.1 (absent according to EN 934-2) |
| Alkali content (Na ₂ O equivalent) according to EN 480-12 (%): | < 2.5 |
| pH according to ISO 4316: | 6.0 ± 1.0 |

- fly ash for manufacturing standard and self-compacting concrete;
- different types of limestone fillers for manufacturing self compacting concrete and any other type of concrete that requires these fillers;
- form-release compounds from the **Mapeform Eco** and **DMA** ranges used to strip form-work from concrete;
- **Mapecure** range from rapid mixing water evaporation.

Our Technical Services Department is available to evaluate which admixture is the most suitable to manufacture freeze/thaw cycles resistant concretes, depending on the type of cement used.

DOSAGE

Dosage by volume

from 0.5 to 1 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

Dynamon SR3 is available in bulk, 200 l drums, 1000 l tanks.

STORAGE

Store in sealed containers and protect from frost. Exposure to direct sunlight can provoke variations of the colour tone without altering in any way the performances of the product.

SAFETY INSTRUCTIONS FOR THE PREPARATION AND APPLICATION

Dynamon SR3 is not considered dangerous according to the current regulation regarding the classification of mixtures. It is recommended to wear gloves and goggles and to take the usual precautions taken for the handling of chemicals. For further and complete information about the safe use of our product please refer to the latest version of our Material 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

All relevant references for the product are available upon request and from www.mapei.com



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