

Dynamon SR 21

Modified acrylic-based superplasticiser for concrete with a low water/cement ratio and a good workability maintenance

DESCRIPTION OF THE PRODUCT

Dynamon SR 21 is a modified acrylic-based admixture specifically developed for ready-mixed concrete, and part of MAPEI's **Dynamon SR** system.

WHERE TO USE

Thanks to its high workability (S4 or S5 consistency class according to EN 206-1), concrete made with **Dynamon SR 21** is easy to apply while fresh and offers very high mechanical performance characteristics when hardened.

Dynamon SR 21 is particularly recommended for the ready-mixed concrete sector, and whenever a considerable reduction in mixing water is required, coupled with good acceleration of its mechanical properties after short curing times.

Dynamon SR 21 also guarantees a good initial workability retention for all the consistency classes of concrete.

Its performance characteristics make it particularly suitable for making self-compacting concrete. For this type of concrete, we also recommend combining **Dynamon SR 21** with **Viscostar 3K** or **Viscofluid SCC/10** viscosity modifiers to prevent the risk of segregation, and to guarantee the homogeneity of the mix, even when slump-flow is particularly high.

Dynamon SR 21 is commonly used in the production of ready-mixed concrete:

- with high mechanical performance characteristics and good maintenance of workability;
- for waterproof, durable applications in the exposure classes defined in EN 206-1;
- in strength class R_{ck} 25-50 N/mm²;
- self-compacting concrete with good maintenance of workability.

TECHNICAL CHARACTERISTICS

Dynamon SR 21 is a water solution with acrylic polymers (without formaldehyde), that efficiently disperse cement granules and allow a slow development of the initial products of cement hydration.

HOW TO USE

- **Dynamon SR 21** develops its maximum dispersive action when it is added after all the other components in the mix (cement, aggregates, minerals or fillers and at least 80% of the mixing water) and before adding **Viscostar 3K** or **Viscofluid SCC/10**.

COMPATIBILITY WITH OTHER PRODUCTS

Dynamon SR 21 is compatible with other admixtures used to produce special concrete, especially the following:

- **Viscofluid SCC/10** or **Viscostar 3K** viscosity modifiers used for making self-compacting concrete;
- hardening accelerating chloride-free admixtures from the **Mapefast** range for reaching very high mechanical strengths at early ages;
- **Mapeplast SF** silica fume-based powdered admixture used to produce "top quality", high-strength concrete with good waterproofing and durability properties;
- **Expacrete** expansive admixture used to produce shrinkage-compensating concrete;
- lime and other types of fillers used to make self-compacting concrete and all other types of concrete which require the addition of this component;
- **DMA** form-release agents and **Mapeform Eco** for stripping form-work from concrete;

TECHNICAL DATA (typical values)	
PRODUCT IDENTITY	
Consistency:	liquid
Colour:	amber
Density according to ISO 758 (g/cm ³):	1.08 ± 0.02 at +20°C
Main action:	to increase the workability and/or reduce the amount of mixing water required, and to maintain workability for long periods
Classification according to EN 934-2:	high-efficiency, superplasticising and water-reducing agent according to tables 3.1 and 3.2
Classification according to ASTM C494:	type F
Classification according to ASTM C1017:	type I
Water-soluble chloride content according to EN 480-10 (%):	< 0.1 (absent according to EN 934-2)
Alkali content (equivalent Na ₂ O) according to EN 480-12 (%):	< 2.0
pH according to ISO 4316:	5.5 ± 1

- Mapeure curing emulsions to protect form-released concrete structures from rapid water evaporation.

CONSUMPTION

Dosage by volume:

from 0.7 to 1.5 litres every 100 kg of cement for conventional concrete;
from 0.7 to 1.5 litres every 100 kg of fines (sieved 0.1 mm) for self-compacting concrete. Different dosages from those suggested must be previously tested through concrete trials, in addition to consulting MAPEI Technical Services Department.

PACKAGING

Dynamon SR 21 is available in bulk quantities, 200 l drums, and 1,000 l tanks.

STORAGE

Dynamon SR 21 may be stored for 12 months in sealed containers protected from frost. If exposed to direct sunlight, the colour of the product may change without affecting its performance characteristics.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Dynamon SR 21 is not considered hazardous according to current norms and guidelines regarding the classification of mixtures. However, we recommend using protective gloves and goggles, and to take the usual precautions for handling chemical products. 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

LEGAL NOTICE

The contents of this Technical Data Sheet ("TDS") may be copied into another project-related document, but the resulting document shall not supplement or replace requirements per the TDS in force at the time of the MAPEI product installation. The most up-to-date TDS can be downloaded from our website www.mapei.com.

ANY ALTERATION TO THE WORDING OR REQUIREMENTS CONTAINED OR DERIVED FROM THIS TDS EXCLUDES THE RESPONSIBILITY OF MAPEI.

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



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