

Dynamon SX 14

Fine aggregate supplementing superplasticizer for concrete

DESCRIPTION

Dynamon SX 14 is a liquid superplasticizing admixture for high quality concrete (waterproof, durable, and with high mechanical strength) with high retention of workability.

Dynamon SX 14 is a completely formaldehyde-free admixture for concrete based on non-sulphonated acrylic polymers.

WHERE TO USE

Because of its high workability (consistency classes S4 or S5 according to EN 206-1) and reduced amount of mixing water, concrete prepared with **Dynamon SX 14** is easy to place whilst fresh state and has high mechanical strength when hardened.

Dynamon SX 14 is especially recommended for all applications which require retention of workability without compromising high mechanical performance even at early age.

Dynamon SX 14 is mainly used for:

- waterproof and durable concrete with high and very high compressive strength with exposure class in compliance with EN 206-1;
- concrete that is pumpable over long distances;
- pumped concrete mixed with low cement factor and lacking fine aggregate.

Some application examples

Because of its high reduction of mixing water, and its ability to compensate for the lack of fine aggregate in the mix, **Dynamon SX 14** is a superplasticizer especially recommended for:

- ready-mix concrete for waterproof structures in the presence of aggressive agents, including chemicals

(sewage treatment tanks, digesters, reservoirs, canals, tunnels, etc.);

- high quality ($R_{ck} > 40 \text{ N/mm}^2$) and very high quality ($R_{ck} > 50 \text{ N/mm}^2$) ready-mix concrete;
- pumped concrete over long distances;
- pumped concrete with low cement factor.

TECHNICAL CHARACTERISTICS

Dynamon SX 14 is a totally formaldehyde-free water solution of acrylic polymers that can effectively disperse cement granules with secondary components that significantly improve the cohesion and the pumpability of concrete.

APPLICATION PROCEDURE

Dynamon SX 14 admix 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)

COMPATIBILITY WITH OTHER PRODUCTS

Dynamon SX 14 admixture is compatible with other products for producing special concrete, especially with:

- chloride-free, hardening accelerating admixes from the **Mapect** range to achieve very high mechanical strength after short curing cycles;
- air entraining admixes from the **Mapeair AE** range used in the production of concrete resistant to freeze/thaw cycles;
- **Mapeplast SF**, micro-silica powder admixture for producing top quality concrete with strength, durability and impermeability;

TECHNICAL DATA (typical values)	
PRODUCT IDENTITY	
Appearance:	liquid
Colour:	amber
Density according to ISO 758 (g/cm ³):	1.06 ± 0.02 at +20°C
Principal action:	increased and extended workability and / or reduction of water content
Secondary action:	improves pumpability
Classification according to EN 934-2:	set retarding, high range water reducing, water retaining, superplasticizer, tables 11.1, 11.2 and 4
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
pH content according to ISO 4316:	6.5 ± 1.0

- **Expacrete** expanding agent for the production of shrinkage compensated concrete;
- fly-ash and silica fume for the production of concrete with artificial pozzolan;
- form-release agents **DMA** and **Mapecore Eco** for stripping formwork from concrete;
- **Mapecure** curing compounds for protection from rapid evaporation of water from concrete without formwork.

CONSUMPTION

Dose by volume:

from 0.5 to 1.5 l for every 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 SX 14 is available in bulk, 200 l drums and in 1000 l tanks.

STORAGE

Dynamon SX 14 can be stored for 12 months in closed containers protected 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 SX 14 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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