

Dynamon NRG-400

Superplasticizing admixture for precast production



DESCRIPTION OF PRODUCT

Dynamon NRG-400 is a modified acrylic-based polymer blend, manufactured especially for the element industry.

Dynamon NRG-400 is an advancement of Mapei's **Dynamon SP** system. The **Dynamon SP** system is based on DPP technology (Designed Performance Polymer), a chemical process where the admixtures' properties are custom-made for different concrete uses. This process has been developed with help from Mapei's own composition and production of monomers.

WHERE TO USE

Concrete with **Dynamon NRG-400** added gives good workability (Consistency Class S4 or S5, based on EN 206), making pouring easier. At the same time, it gives concrete excellent mechanical properties when finally cured and hardened.

Dynamon NRG-400 is particularly well suited in the manufacture of elements where considerable water reduction and high early strength is needed within the many different consistency classes.

Dynamon NRG-400 is ideal for the production of self-compacting concrete, as it ensures good flow and accelerated solidity development.

Dynamon NRG-400 can be combined with viscosity modifying admixtures **Viscostar 3K** or **Viscofluid SCC/10** for self-compacting concrete lacking fine particles, to avoid the risk of separation and to ensure homogeneous

properties of the mixture, even with very high slump.

TECHNICAL CHARACTERISTICS

Dynamon NRG-400 consists of a new generation acrylic-based polymers. The polymers are quite effective in dispersing clusters of cement grains and ensuring speedy temperature rise inside the concrete.

This effect is primarily used most advantageously in the following three ways:

- To reduce the amount of water at the same workability.
- To increase workability when water/cement ratios are equal.
- To reduce both water and cement when water/cement conditions and workability are equal.

APPLICATION PROCEDURE

Dynamon NRG-400 reaches maximum effect when added after the other materials (cement, other admixtures, pozzolan or filler, and at least 80 % mixing water) and before addition of **Viscostar 3K** or **Viscofluid SCC/10**.

COMPATIBILITY WITH OTHER PRODUCTS

Dynamon NRG-400 is compatible with other products in producing special use concrete, particularly with:

- **Viscostar 3K** or **Viscofluid SCC/10**, viscosity modifiers and stabilizing admixtures for producing selfcompacting concrete.

TECHNICAL DATA (typical values)

PRODUCT IDENTITY

Consistency:	liquid
Colour:	amber
Viscosity:	easy flowing; < 30 mPa·S
Dry solids content (%):	30.0 ± 1.0
Density (g/cm³):	1.07 ± 0.02
pH:	6 ± 1
Chlorides (%):	< 0.1
Alkali content (equiv. Na₂O) (%):	< 1.0

- **Mapefast**, accelerators for early surfacing/ smoothing and/or high early strength.
- Silica for production of normal and self-compacting concrete.
- Different kinds of fillers for producing self-compacting concrete.
- **Mapeform**, form release agents.
- **Mapecure**, curing membranes for protection of fresh concrete from accelerated water evaporation.

DOSAGE

For traditional applications - from 0.3 to 2.0 % of cement-weight.

PACKAGING

Dynamon NRG-400 is available in 25 liter cans, 200 liter drums, 1000 liter IBC tanks and in tank.

STORAGE

The product must be stored at temperatures between +8 and +35°C, and will maintain properties for at least one year when stored unopened in original packaging. If the product is exposed to direct sunlight, colour variation may occur, but this will not affect the technical properties of the product.

SAFETY INSTRUCTIONS FOR PREPARATION AND USE

Instructions for the safe use of our products can be found on the latest version of the SDS available from our website www.mapei.no

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 web site www.mapei.no

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All relevant references for the product are available upon request and from www.mapei.no

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8007-08-2018 (GB)