Dynamon NRG 1037 is a highly efficient superplasticizer used to make high quality concrete in the pre-cast sector.

WHERE TO USE
Due to its physical and mechanical properties, Dynamon NRG 1037 improves the performance characteristics of concrete during the casting phase and improves its strength and setting properties during the hardening stage.

Dynamon NRG 1037 is particularly recommended for producing concrete that requires low water content, workability characteristics compatible with the production processes adopted in precast plants and an early strength development to speed up the manufacturing times.

Thanks to its properties, Dynamon NRG 1037 is particularly suitable for the production of conventional and self-compacting concrete. In such cases, Dynamon NRG 1037 may be used in combination with viscosity modifying admixtures, such as Viscofluid SCC/10 or Viscostar 3K, to provide more stability to concrete mixtures, even with higher slump.

Dynamon NRG 1037 is strongly recommended in precast concrete plants, especially for the production of reinforced concrete elements such as:
• pre-stressed beams;
• curtain wall panels;
• precast segments and blocks;
• predalles.

TECHNICAL CHARACTERISTICS
Dynamon NRG 1037 is an admixture made from new generation modified acrylic polymers in a formaldehyde-free acqueous solution. The special molecular structure of the polymers used in the product allows the cement particles to be dispersed efficiently, and to obtain a highly plastic mix. Dynamon NRG 1037 allows the mix to maintain the same consistence for a long time without affecting the hydration process of the cement. The mechanical strength of concrete admixed with Dynamon NRG 1037, is always guaranteed at early ages. Dynamon NRG 1037 also has the capability to control the total amount of air entrapped into the concrete. Low air content reduces permeability and improves durability and fair face of concrete.
HOW TO USE
The product is supplied ready to use. Dynamon NRG 1037 develops its maximum dispersion effect when it is added to mixing water, or at least to part of it, and added to the mixture (cement, aggregates, mineral additives, etc.). After adding Dynamon NRG 1037 it is strongly recommended to extend the mixing time by at least two minutes to enable all the components to be distributed evenly throughout the mix.

COMPATIBILITY WITH OTHER PRODUCTS
Dynamon NRG 1037 is compatible with other MAPEI products used in the production of special concrete and particularly with the following:

- chloride-free, hardening accelerating admixtures from the Mapefast range to achieve very high strength performance at early ages;
- Viscostar and Viscofluid ranges of viscosity modifiers used for making self-compacting concrete;
- Mapeplast SF silica fume-based powdered admixture used in the production of highly durable concrete and mortar;
- Expancrete expansive agent used in the production of shrinkage-compensating concrete;
- fly-ash and lime-based fillers used for making conventional and self-compacting concrete;
- form-release agents from the Mapeform Eco and DMA ranges for instant or delayed demoulding;
- curing agents from the Mapecure range to prevent rapid evaporation of mixing water from concrete;

When manufacturing concrete resistant to freeze/thaw cycles our Technical Services Department is available to advise on the most suitable product from the Mapeair AE range according to the type of cement used.

DOSAGE
Dosage by volume:
from 0.5 to 1.5 litres every 100 kg of cement for conventional concrete. Different dosages from those suggested recommended above must be tested beforehand on concrete and, in all cases, only after consulting MAPEI. Technical Services Department.
PACKAGING
Dynamon NRG 1037 is available in bulk quantities, 200 litre drums, and 1,000 litre tanks.

STORAGE
Dynamon NRG 1037 may be stored up to 12 months in sealed containers protected from frost. If exposed to direct sunlight, the product may change colour without affecting its performance characteristics.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION
Dynamon NRG 1037 is not considered dangerous according to the current regulations regarding the classification of mixtures. It is recommended to wear protective gloves and goggles and to take the usual precautions for handling 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

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