**DESCRIPTION**
Dynamon NRG 1030 is a highly efficient superplasticiser used to make high quality concrete for use in the pre-cast sector.

**WHERE TO USE**
Due to its physical and chemical properties, Dynamon NRG 1030 improves the performance characteristics of concrete during the casting phase and improves its mechanical strength and setting properties during the hardening stage.

Dynamon NRG 1030 is particularly recommended for producing concrete that requires a very low water content, workability characteristics compatible with the production processes adopted in pre-cast plants and a rapid development of early strength to speed up the manufacturing times.

Thanks to its properties, Dynamon NRG 1030 is particularly suitable for the production of conventional and self-compacting concrete. In such cases, Dynamon NRG 1030 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 1030 is strongly recommended in pre-cast concrete plants, especially for the production of concrete elements such as:
- pre-stressed beams;
- infill wall panels;
- pre-cast segments and blocks;
- predalles.

**TECHNICAL CHARACTERISTICS**
Dynamon NRG 1030 is an admixture made from a new generation of modified, formaldehyde-free acrylic polymers in aqueous solution. The special molecular structure of the polymers used in the product allows the cement particles to be dispersed efficiently, thus obtaining a highly plastic mix. Dynamon NRG 1030 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 1030 at early stages of curing is always guaranteed. Dynamon NRG 1030 also has the capacity to control the total amount of air entrapped into 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 1030 develops its maximum dispersion effect when it is added after all the other components in the mix (cement, aggregates, mineral fillers, etc.) or at least after a part of the mixing water. After adding Dynamon NRG 1030 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 1030 is compatible with other MAPEI S.p.A. 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 mechanical performance at early stages of curing;
- 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-compensated 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 releasing concrete from formworks;
- 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 above must be tested beforehand on concrete and, in all cases, only after consulting MAPEI S.p.A. Technical Services Department.

TECHNICAL DATA (typical values)

<table>
<thead>
<tr>
<th>PRODUCT IDENTIFICATION</th>
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<tbody>
<tr>
<td>Consistency: liquid</td>
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<tr>
<td>Colour: off-white</td>
</tr>
<tr>
<td>Density according to ISO 758 (g/cm³): 1.04 ± 0.02 at +20°C</td>
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<tr>
<td>Main action: increase in workability and/or reduction of mixing water and acceleration in the development of mechanical strength</td>
</tr>
<tr>
<td>Classification according to EN 934-2: high-efficiency water-reducing agent, superplasticiser and hardening accelerator according to tables 3.1, 3.2 and 7</td>
</tr>
<tr>
<td>Classification according to ASTM C494: type C and type F</td>
</tr>
<tr>
<td>pH according to ISO 4316: 4.5 ± 1.0</td>
</tr>
<tr>
<td>Water-soluble chloride content according to EN 480-10 (%): &lt; 0.1 (absent according to EN 934-2)</td>
</tr>
<tr>
<td>Alkali content (equivalent Na₂O) according to EN 480-12 (%): &lt; 1</td>
</tr>
</tbody>
</table>

Dynamon NRG 1030
PACKAGING
Dynamon NRG 1030 is available in bulk quantities, 200 litre drums and 1,000 litre tanks.

STORAGE
Dynamon NRG 1030 may be stored up to 12 months in sealed containers protected from frost. The exposure to direct sunlight may change the product’s colour, though without affecting its performance characteristics.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION
Dynamon NRG 1030 is not considered hazardous 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 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