

## Superplasticizing admixture

### PRODUCT DESCRIPTION

**Dynamon SR-N** is a high performance superplasticizing admixture based on modified acrylic polymers.

The product is part of the **Dynamon**-system based on the Mapei developed DPP technology (DPP = Designed Performance Polymers) where the properties of the admixture are tailored according to the specific performances required of the concrete.

The **Dynamon**-system is developed on the basis of Mapei's own design and production of monomers.

### AREA OF USE

**Dynamon SR-N** is a superplasticizing admixture used to improve workability and/or reduce the amount of mixing water.

**Dynamon SR-N** is a **Dynamon** variant where by normal dosage (0.4 - 1.5%) a longer pot life (less slump loss) can be achieved than with **Dynamon SX** products.

The product is therefore specially suited for ready-mix concrete production, where the time from mixing to placement is relatively long, e.g. due to long transportation times or requirements for a slow rate of climb.

**Dynamon SR-N** nevertheless gives high early strength at normal dosages due to its effective dispersion of the cement. All **Dynamon** products are significantly different from conventional sulphonated melamine based and sulphonated naphthalene based superplasticizers, and also from first generation acrylic based polymers in terms of their superior water-reduction. Over-dosing can cause concrete separation. We always recommend the use of trial pours using the actual parameters. The dosage required to achieve a particular workability will be considerably lower for **Dynamon SR-N** than for previous superplasticizers. In contrast to

conventional melamine or naphthalene based admixtures, **Dynamon SR-N** produces the maximum effect regardless of when it is added, but the time of addition can influence the mixing time. If at least 80% of the mixing water is added before **Dynamon SR-N** the required mixing time will generally be shortest. It is nevertheless important to perform trials using the actual mixing equipment.

### TECHNICAL CHARACTERISTICS

**Dynamon SR-N** is an aqueous solution of active acrylic copolymers which effectively disperse the cement grains. This effect can, in principle, be used in three ways:

1. To reduce the amount of mixing water, but at the same time maintain the concrete workability.

Lower w/c ratio gives increased strength, reduced permeability and improved durability.

2. To increase workability compared to concrete with the same w/c ratio. The strength remains the same but ease of placement is improved.

3. To reduce both the water and the cement without altering the mechanical strength.

Through this method it is possible to reduce costs (less cement), shrinkage (less water) and also the risk of temperature gradients due to the lower heat of hydration.

This last effect is particularly important for concrete containing a high percentage of cement.



**CE**

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EN-934-2:T 3.1/3.2

### Produsent:

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**ATTENTION**

**Dynamon SR-N** can be combined with other Rescon Mapei admixtures, e.g. set accelerating additives such as **Mapequick SA** and set retarding admixtures, such as **Mapetard R**. The product is also compatible with air entraining admixtures for the production of frost resistant concrete, e.g. **Mapeair L** or **Mapeair 25** (the selection of air entraining admixture depends upon the other components e.g. cement type and aggregate).

**PACKAGING**

**Dynamon SR-N** is available in 25 litre cans, 200 litre drums, in 1000 litre containers and can also be delivered in bulk. The product must be kept at temperatures above +5°C, and can be stored for at least 1 year in sealed containers. The product should be stirred carefully before use to ensure a homogeneous and consistent product. Protect from direct sunlight.

**SAFETY INSTRUCTIONS**

For health, safety and environmental information, see separate HMS data sheet at [www.resconmapei.com](http://www.resconmapei.com).

**DOSAGE**

To achieve the desired results (strength, durability, workability, cement reduction) add **Dynamon SR-N** in dosages between 0.4 and 1.5% of the cement weight. Increased dosages will also increase the open time (the length of time the concrete is workable).

**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 conformation 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 any case, the user alone is fully responsible for any consequences deriving from the use of the product.*

*All deliveries from Rescon Mapei AS are made in accordance with the sale and delivery conditions applicable at the time, and these conditions are taken to be accepted on placement of an order.*

TECHNICAL SPECIFICATIONS		
Form:	Liquid	
Colour:	Yellowish	
Viscosity (Brookfield Viscometer DV-1, LV1, 100rpm at 20±2°C):	Low viscosity;<30 cP	
Dry solids content, %:	19.5 ± 1.0	
Specific weight, g/cm <sup>3</sup> :	1.05 ± 0.02	
pH-value:	6.5 ± 1	
Chloride content, %:	< 0.01	
Alkali content (equiv. Na <sub>2</sub> O) %:	< 2.0	
CONCRETE PERFORMANCES		
<i>T 3.1</i>		
Cement kg/m <sup>3</sup> (Norcem standard)	350	350
Admixture dosage (% by weight of cement)	0	1,0
W/C ratio:	0.48	0.41
Compressive strength (i N/mm <sup>2</sup> ):		
1 day	18	25
7 days	35	45
28 days	44	55
CONCRETE PERFORMANCES		
<i>As superplasticizer (increased slump)</i>		
Cement, kg/m <sup>3</sup> (Norcem standard cement):	350	350
Admixture dosage (in % of cement weight):	0	1.0
W/C ratio:	0.49	0.49
Air content:	2.4	1.9
Workability, mm:		
- slump, 5 min	30	200
- slump, 30 min	25	200
- slump flow, 5 min		380
- slump flow, 30 min		370

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