

## Air entraining admixture

### WHERE TO USE

**Mapeair 25** is a surface active agent which promotes the formation of small air bubbles and is used to improve the frost resistance of concrete and mortar. Mapeair 25 also gives improved workability and reduces the risk or segregation. The product is usually used in combination with Rescon Mapei's plasticising or superplasticising admixtures.

**Mapeair 25** is based on synthetic tensides and tall oil derivatives.

### TECHNICAL CHARACTERISTICS

Concrete always contains a certain amount of air (1 -3%). In order to meet the usual requirements of 4-6% air in fresh concrete **Mapeair 25** is added, which produces smaller and more evenly distributed air bubbles, which in turn leads to improved freeze-thaw resistance. Air introduced during mixing is formed into small evenly distributed pores in the presence of **Mapeair 25**. The measured air volume and spacing factor in hardened concrete is given in the technical data. These entrained air bubbles also improve workability and reduce the amount of water required. Increased air content leads generally to a decrease in compressive strength. A general rule is that 1% of air reduces the compressive strength by 5%. This is partly compensated for by the reduced need for water and by adding plasticising and/or superplasticising admixtures.

**Mapeair 25** also improves stability during transportation by reducing the risk of segregation for concrete containing a low volume of fine particles, and by actively counteracting bleeding (transportation of water to the surface of the fresh concrete).

### DIRECTIONS FOR USE

**Mapeair 25** is supplied ready for use and can be added directly to the mixer. To obtain an even distribution of air from

batch to batch, it is important that **Mapeair 25** is added at the same stage of the mixing procedure each time. The dosage required to give the desired air content varies with aggregate, cement type and quantity. Other additives may also have an influence. It is important that the addition of **Mapeair 25** is determined by trial mixing and that the air content in the fresh concrete is checked regularly.

### DOSAGE

0.05 – 0.5 litres of **Mapeair 25** pr m<sup>3</sup> of concrete. As the quantity of **Mapeair 25** used is usually small, dilution with water is an advantage.

Use 1 part **Mapeair 25** to 9 or 19 parts water for a more reliable dosage. The product dissolves easily in water. Stir before use to ensure a homogenous mixture.

### PACKAGING

**Mapeair 25** is supplied in 25 litre cans and 200 litre drums. 1000 litre containers can also be supplied.

The product must be stored frost-free and can be stored for at least 1 year in unopened original packaging.

### ATTENTION

Variations in other components in the concrete can greatly influence the formation of air bubbles in concrete. In some cases duration and method of transportation can also produce variations in air content.

If the mixing time has been too short the total measured air content may increase from production to delivery, whereas in most cases a reduction in air content is observed.

Normally this reduction is the result of the release of larger, undesirable air bubbles. The producer must therefore base his calculations on experience with the particular constituents used.

### SAFETY INSTRUCTIONS

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



### Produsent:

Rescon Mapei AS  
Vallsetvegen 6, 2120 Sagstua, Norway  
Tlf: +47 62 97 20 00 Fax: +47 62 97 20 99  
post@resconmapei.no  
www.resconmapei.com

Rescon Mapei AS  
et selskap i



**WARNING**

Although the technical details and recommendations contained in this product report 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 applications: 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.

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.

**N.B! FOR PROFESSIONALS**

**TECHNICAL DATA**

Mapeair 25 is approved as an air entraining admixture in accordance with NS-EN 934-2 by Vattenfall Utveckling.  
Certification number: 02504

**Product specifications:**

Form:	Liquid
Colour:	Pale yellow/brown
Viscosity:	Low viscosity; < 10mPa · S
Solids content, %:	4.0 ± 0.4
Density, g/cm <sup>3</sup> :	1,00 ± 0,02
pH:	9 ± 1
Chloride content, %:	≤ 0.01
Alkali content (Na <sub>2</sub> O-equivalent), %:	≤ 0.5

**Characteristics of concrete containing Mapeair 25:**

Volume of air in concrete mixture (0.07% weight of cement):	5.8% (reference:1.5%)
Spacing factor, measured in hardened concrete, mm:	0.10 (requirement < 0.200 mm)
Specific surface (mm <sup>2</sup> /mm <sup>3</sup> ):	35 (should not be lower than 25)
Frost resistance, spalling, kg/m <sup>2</sup> :	0.10 (requirement < 0.5 kg/m <sup>2</sup> )

**Produsent:**

Rescon Mapei AS  
Vallsetvegen 6, 2120 Sagstua, Norway  
Tlf: +47 62 97 20 00 Fax: +47 62 97 20 99  
post@resconmapei.no  
www.resconmapei.com

Rescon Mapei AS  
et selskap i

