



# Mapejet System NS 15

## Cement-free binder for low and very low permeable ground consolidation

### DESCRIPTION

**Mapejet System NS 15** is a cement free binder made up of inorganic mineral compounds.

### WHERE TO USE

**Mapejet System NS 15** is a specially formulated product used to consolidate ground that has low and very low permeability and for strengthening unconsolidated ground.

### Some application examples

- Consolidation of low and very low permeable, inconsistent and/or unconsolidated grounds.
- Waterproofing of gravel and alluvium.
- Saturation of residual voids following injection mortars.

### TECHNICAL CHARACTERISTICS

**Mapejet System NS 15** is a cement-free binder made up of inorganic mineral compounds.

Component 1 of **Mapejet System NS 15** is a liquid nano-silica based slurry, containing an inorganic salt (colloidal silica).

The system is activated using an inorganic saline solution (**Mapejet System NS 15** component 2) that will be determined according to the times required for gel time system.

After mixing the two components and injection, takes place a process of gelation and subsequent hardening of the soil which allows a significant increase of the injected ground internal cohesion. Furthermore, it gives rise to the saturation of voids **Mapejet System NS 15** is able to give mechanical strength to the treated ground, thus enabling a quicker and safer work advance. After mixing the two parts, **Mapejet System NS 15** becomes a super-fluid solution with a very low viscosity, specially

formulated to guarantee penetration into the ground needing treatment, even where there exists fine or medium-fine granulometries and/or exists a low or very low coefficient of permeability.

### HOW TO USE

#### Product preparation

Mixing and laying of the product are used for vertical mixers and injectors standard type. **Mapejet System NS 15** allows fast-mixing without need of dedicated equipment.

Two components should be mixed properly with a 100 part of component 1 and 8 part of component 2. It is suggested to mix only the amount which has been indicated to reach the technical parameters specified in the technical data sheet (gelling 1.5 hours at +20°C). The mixture should be such as to obtain a homogenous fluid: continuously mix for approx. 2 minutes, until achieving a homogeneous fluid without lumps.

#### Application of product

After positioning the chosen equipment, pump the mix with a pressure depending on the permeability of the ground that should be consolidated and on the depth of the consolidation required. It is recommended not to change the mixing ratio. The product could be applied at temperature range from +5°C to +35°C.

Please contact our UTT (**Underground Technology Team**) technical service in order to optimise the mixing ratio between the two parts of the **Mapejet System NS 15**.

#### Equipment cleaning

For cleaning the equipment in contact with **Mapejet System NS 15**, use water in the case of fresh product, while in the case of hardened product before

TECHNICAL DATA (typical values)	
PRODUCT IDENTITY	
<b>MAPEJET SYSTEM NS 15 COMP. 1</b>	
Appearance:	liquid
Color:	milky
Density (ISO 758) (g/cm <sup>3</sup> ):	1.15 ± 0.03
pH:	9-10
Viscosity:	< 15 mPa·s (at +20°C)
Max diameters of particles:	63 nm
<b>MAPEJET SYSTEM NS 15 COMP. 2</b>	
Appearance:	liquid
Color:	transparent
Density (ISO 758) (g/cm <sup>3</sup> ):	1.13 ± 0.03
Viscosity:	< 20 mPa·s (+20°C)

washing remove mechanically the hardened parts.

#### DOSAGE

The dosage depends on the specific characteristics of the ground to be treated.

#### PACKAGING

**Mapejet System NS 15** comp. 1: 1133 kg tanks and on bulk.

**Mapejet System NS 15** comp. 2: 226 Kg drums.

#### STORAGE

**Mapejet System NS 15** comp. 1 and **Mapejet System NS 15** comp. 2 should be stored in unopened containers, protected from frost and direct sunlight, for maximum 6 months. In cold environments (< +10°C) it is suggested to store the product protected from frost.

#### SAFETY INSTRUCTIONS FOR THE PREPARATION AND APPLICATION

**Mapejet System NS 15** comp. 1 and 2 are not hazardous according to the current standards on the classification of mixtures. It is recommended to wear protective gloves and goggles and to take the usual precautions for handling chemical products. 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](http://www.mapei.com)

**All relevant references  
for the product are available  
upon request and from  
[www.mapei.com](http://www.mapei.com)**



[www.utt-mapei.com](http://www.utt-mapei.com)



BUILDING THE FUTURE