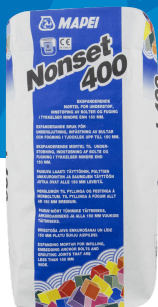


NONSET 400

Expanding mortar for foundations and concrete repairs



AREA OF USE

Nonset 400 is used for all types of foundations and concrete repairs. Mixed mortar must be placed within 40 minutes after mixing to avoid losing expansion. If a denser foundation mix is required, use **Mapectill N**.

Examples of use

- Structural rebuilding of reinforced concrete beams and pillars
- Foundations and installation of concrete elements
- Foundations for installation of machinery
- Foundations for sleepers and crane rails
- Grouting of horizontal non-moving joints

TECHNICAL DATA

Nonset 400 is a cement-based dry mortar, which expands 1 - 3 % before setting. The mortar is composed of cement, well-graded sand, expanding, stabilising and plastifying substances. The mortar is viscous and requires tight shuttering.

Nonset 400 complies with the principles of EN 1504-9 "Products and systems for reparation of concrete structures: Definitions, requirements, quality control and evaluation of compliance. General rules for the use of products and systems", and the requirements of EN 1504-3 "Repair mortar for load bearing and non-load bearing repairs, class R4".

RECOMMENDATIONS

- Do not use **Nonset 400** on vertical surfaces (use **Redirep 45 RSF** or **Mapegrout T40**)
- Do not add cement or other additives to **Nonset 400**
- Do not add water once the mix has begun to set
- Do not use **Nonset 400** if the sack is damaged or has been previously opened
- Do not use **Nonset 400** at temperatures below +5°C

GUIDELINES FOR USE

Preparation

Remove loose concrete and contaminants on the surface. The surface must be free of dust, oil and grease which can reduce adhesion. The casting surface must be sufficiently coarse. Wet the surface with clean water to make it slightly absorbant.

Mixing

Nonset 400 only needs water added. Add 3 - 4 l per 25 kg sack and mix for min. 3 minutes to a smooth consistency. Do not use more water and soften the mix more than necessary to avoid separation, reduction of firmness and poor results. Use a drill and mortar whisk for mixing small amounts. Use a standard cement mixer for large volumes. For thicknesses exceeds 150 mm, gravel 8 - 16 mm can be added to reduce shrinkage.

APPLICATION

Construct shuttering which is sealed, adheres well and projects 25 - 50 mm above the top surface level. The shuttering must be arranged for easy filling. Leave 10 - 20 mm clearance at the sides, to make it easy to check filling and to blend the mixture properly. Filling from one side is important, to allow air to escape. When using a pump, place the hose in the middle of the mould so that the mix flows to all edges. Pour the mix into the mould when casting foundations. Carefully hammer the shuttering side, and insert a long thin object (e.g. reinforcement rod) into the mix to make it flow better and avoid air pockets. Mixing and casting must be performed non-stop until the mould is full. Suitable pumping equipment is recommended for large jobs.

Finish:

We recommend applying **Mapecure 1** (curing membrane) immediately to all exposed surfaces, and to apply water over the next 3 - 4 days. Covering with plastic sheet is also effective, and is preferable when a finish will be applied to the surface.

CLEANING

Fresh mortar can be removed from tools and equipment using water. Hardened material must be removed mechanically.

MIX

1.8 - 1.9 kg mortar per litre mix.

PACKAGING

Nonset 400 is supplied in 25 kg sacks and 1200 kg bags.

STORAGE

Store in a dry place. Shelf life 12 months in unopened packaging.

SAFETY INSTRUCTIONS FOR PREPARATION AND INSTALLATION

Instructions for the safe use of our products can be found on the latest version of the SDS available from our website www.mapei.no

PRODUCT FOR PROFESSIONAL USE.

TECHNICAL DATA (typical values)

PRODUCT IDENTIFICATION

Strength class according to EN 1504-3:	R4
Type:	CC
Appearance:	powder
Colour:	grey
Aggregate:	natural sand 0 - 4 mm
Binder:	cement
Chloride ions content – minimum requirements ≤ 0.05 % - according to EN 1015-17 (%):	≤ 0.05

PRODUCT APPLICATION DATA (at +20°C - 50 % RH)

Colour of mixture:	grey
Mixing ratio:	100 parts of Nonset 400 with 12 - 16 parts water (approx. 3 - 4 l per 25 kg sack)
Consistency of mixture:	liquid
Density of mixture (kg/m ³):	2 250
pH of mixture:	> 12
Application temperature range:	from +5°C to +35°C
Expansion (%):	1 - 3
Bleeding (%):	≤ 0.5
Pot life of mixture:	approx. 40 minutes

FINAL PERFORMANCE (14.8 % blending water)

Performace characteristics	Test method	Minimum requirements according to EN 1504-3 for R4 class mortar	Product performance
Compressive strength (N/mm ²):	EN 12190	≥ 45 (after 28 days)	20 (after 1 day) 35 (after 7 days) 50 (after 28 days)
Flexural strength (MPa):	EN 196-1	none	> 4 (after 1 day) > 7 (after 7 days) > 8 (after 28 days)
Carbonation resistance:	EN 13412	D _k < control concrete (MC(0,45))	pass
Modulus of elasticity in compression (GPa):	EN 13412	≥ 20 (after 28 days)	26.3 (after 28 days)
Bond strength to concrete (MC 0.40 type substrate water/cement ratio = 0.40) according to EN 1766 (MPa):	EN 1542	≥ 2.0 (after 28 days)	> 2.0 (after 28 days)
Capillary absorption (kg/m ² ·h ^{0.5}):	EN 13057	≤ 0.5	< 0.5
Thermal compatibility to freeze-thaw cycles with deicing salts measured as according to EN 1542 (MPa):	EN 13687-1	≥ 2.0 (after 50 cycles)	> 2.0
Exposure class (12% mixing water):	EN 206-1	none	X0/XC4/XS1/XD2/XF3/XA1
Reaction to fire:	Euroclass	Value declared by manufacturer	A1

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 web site www.mapei.no

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