NONSET 120

Expanding mortar for infilling, embedding anchor bolts and grouting joints that are less than 50 mm wide





WHERE TO USE

Nonset 120 is used for anchoring concrete reinforcement, joints and foundation work and is most suitable un thickness up to approx. 50 mm. Mixed mortar must be placed within 40 minutes after mixing to avoid losing expansion.

Some application examples

- Anchoring of concrete reinforcement in concrete and rock.
- Fixing minor foundations in concrete elements.
- Grouting of horizontal non-moving joints.

TECHNICAL CHARACTERISTICS

Nonset 120 is a cement-based dry mortar, which expands 1 - 3 % before setting. The mortar is composed of cement, well-graded sand, expanding, stabilizing and plastifying substances.

Nonset 120 responds to the principles defined in EN 1504-9 (*"Products and systems for protecting and repairing concrete structures: definitions, requirements, quality control and conformity assessment. General principles for the use of products and systems"*) and the minimum requirements of EN 1504-3 (*"Structural and non-structural repairs"*) for structural R4-class mortars and the minimum requirements of EN 1504-6 (*"Anchoring of reinforcing bars"*).

RECOMMENDATIONS

- Do not use **Nonset 120** on vertical surfaces without formwork (or use **Redirep 45 RSF** or **Mapegrout T40**).
- Do not add cement or other additives to **Nonset 120**.
- Do not add water once the mix has begun to set.
- Do not use **Nonset 120** if the bag is damaged or has been previously opened.

GUIDELINES FOR USE

TECHNICAL INFORMATION FOR THE APPLICATION	
Composition of the mix:	100 kg of **Nonset 120** 14 - 18 kg of water
Maximum thickness:	50 mm
Application temperature range:	surrounding and substrate temperature from +5°C to +35°C
Pot life of mix:	approx. 40 minutes (at +20°C)

Preparation

Remove loose concrete and contaminants on the surface. Pour water on the concrete, preferably the day before, to allow it to partially dry again. Remove standing water in holes and cavities. If applying in temperatures below freezing point, the surface must be thawed and any water must be removed. For such conditions, the frost proof variant **Nonset 120 FF** should be used.

Mixing

Nonset 120 only needs water added, 3,5 - 4,5 l per 25 kg bag, and mixing 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. Can be mixed using a powerful drill and whisk for minor repairs. Small amounts can be mixed by hand. Use a standard cement mixer for large volumes.
The instructions for the preparation of the mortar to be used for samples preparation for laboratory tests are reported in the TECHNICAL DATA table.

APPLICATION

For anchoring and element installation

We recommend drilling a hole, minimum 15 mm wider than the bolt to be used. Clean the hole after drilling, and pour **Nonset 120** into the hole using a funnel or suitable pumping equipment. Press bolt into place and secure until the mortar is sufficiently set.

For foundations

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.

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. Remove hardened material mechanically.

MIX

Approx. 1.9 kg mortar per litre mix.

PACKAGING

Nonset 120 is supplied in 25 kg bag, 500 kg and 1200 kg big-bag and bulk.

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 DATA	
Class according to EN 1504-3:	R4
Type according to EN 1504-1:	CC
Consistency:	powder
Colour:	grey
Maximum size of aggregate:	1 mm
Chloride ion content – minimum requirement ≤ 0.05 % - according to EN 1015-17:	≤ 0.05 %

TECHNICAL INFORMATION FOR PRODUCT PREPARATION	
Composition of the mix:	100 parts in weight of **Nonset 120** with 17 % of water
Preparation of the mix:	according to EN 196-1
Curing condition:	CC (according to Annex A – EN 12190)

CHARACTERISTICS OF THE FRESH MIX (at +20°C and 50 % R.H.)	
Colour of mix:	grey
Consistency of mix:	fluid
Density of mix:	2200 kg/m^3
Expansion according to EN 445:	1 - 3 %
Bleeding according to EN 445:	≤ 0.5 %

FINAL PERFORMANCE
According to curing defined in the tests methods

Performance characteristic	Test method	Requirements according to EN 1504-3 R4	Requirements according to EN 1504-6	Product performance
Compressive strength: **- 1 days** **- 7 days** **- 28 days**	EN 12190	 - - ≥ 45 MPa	not required	 > 25 MPa > 35 MPa > 50 MPa
Flexural strength: **- 1 days** **- 7 days** **- 28 days**	EN 196-1	not required	not required	 > 5 MPa > 8 MPa > 9 MPa
Modulus of elasticity in compression:	EN 13412	≥ 20 GPa	not required	24 GPa
Adhesion to concrete by pull-off:	EN 1542	≥ 2.0 MPa	not required	> 2.0 MPa
Capillary absorption:	EN 13057	≤ 0.5 kg/m^2·h$^{0.5}$	not required	< 0.5 kg/m^2·h$^{0.5}$

Thermal compatibility - freeze-thaw cycles using de-icing salts (50 cycles):	EN 13687-1	≥ 2.0 MPa	not required	> 2.0 MPa
Resistance to accelerated carbonation:	EN 13295	carbonation depth ≤ than reference concrete	not required	test passed
Pull-out strength of steel rebar – movement with a load of 75 kN:	EN 1881	not required	≤ 0.6 mm	< 0.1 mm
Reaction to fire:	EN 13501-1	Euroclass	Euroclass	A1

NOTES: Preparation of samples: compaction according to EN 196-1.

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 any case, be taken as merely indicative and subject to confirmation after long-term practical application. For this reason, anyone who intends to use this product must ensure beforehand that it is suitable for its envisaged application. Anyway the user alone is fully responsible for any consequences deriving from the use of the product.
The values declared in the TECHNICAL DATA table (typical values) were obtained in compliance with test methods and curing cycles defined in the technical standards referenced therein. Therefore please note that the use of test procedures or methods other than those indicated in the table could lead to different values and that, in such cases, any liability of our company is excluded.

Please refer to the current version of the technical data sheet, available from our web site www.mapei.no

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 effect at the time of the MAPEI product installation. For the most up-to-date TDS and warranty information, please visit our website at www.mapei.no

ANY ALTERATIONS TO THE WORDING OR REQUIREMENTS CONTAINED IN OR DERIVED FROM THIS TDS SHALL VOID ALL RELATED MAPEI WARRANTIES.

Mapei AS
Vallsetvegen 6, 2120 Sagstua, Norge
+47 62 97 20 00 www.mapei.no post@mapei.no

10038-11-2025-gbxno

Any reproduction of texts, photos and illustrations published here is prohibited and subject to prosecution