



TOPOLINE 911



Epoxy resin-based binder.

GENERAL CHARACTERISTICS

- Fast-setting, low-viscosity, filler-free, solvent-free, two-ingredient epoxy binder.
- Surfaces treated with mortars based on **TOPOLINE 911** are resistant to extreme mechanical wear, and are ready for use very quickly.
- Excellent adherence to concrete, stone, steel, wood, asbestos cement.
- Mortars made with **TOPOLINE 911** can have mineral pigments added to them.

FIELDS OF APPLICATION

- Local repairs to worn flooring (holes, slab edges)
- Creation of coatings and thin synthetic screeds
- Binder used pure or with the addition of 1:1 fine quartz (0.1 - 0.3) as a sealing grout for bars or anchoring rods in concrete slabs
- Binder for filling mortar used in runways.
- Binder for highly porous mortar (drainage).
- Rapid primer for self-smoothing coatings of the **TOPOLINE 921** type

- The colour of the screed produced depends on the colour of the aggregate (quartz sand) used.
- The mix can be coloured by the addition of pigments on site.



PHYSICAL CHARACTERISTICS OF THE PURE BINDER

Viscosity of mix A+B: 300 cps at +20°C. Appearance: slightly amber-coloured fluid liquid
Density of binder (A + B): approx. 1.1 at + 20°C. Pot life: 20' at 20°C for 1 kg

The mechanical resistance of the pure binder is greater than or equal to 100 N/mm for both compression and bending, while the modulus of elasticity is approx. 35,000 N/m.

Proportions of ingredients A+B: 75 parts A to 25 parts hardener by weight.

TECHNICAL CHARACTERISTICS OF MORTARS



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MECHANICAL RESISTANCE								
Prisms 4x4x16 kept at 20°	Compression N/mm				Bending N/mm			
	6 h	12 h	24 h	7 d	6 h	12 h	24 h	7 d
Age of samples								
Ratio A + B / C Binder TOPOLINE 911 (A + B) Filler B622 (1/9)								
* with normal hardener	-	-	> 20	> 100	-	-	> 8	> 35
* with R25 type rapid hardener	> 12	> 40	> 90	> 120	> 8	> 19	> 27	> 30

- **mechanical resistance** increases during the first 28 days.
- **dry temperature resistance:** 150°C for 5 minutes maximum.
- **chemical resistance** of mortar produced with **TOPOLINE 911** depends mainly on the quantity of the filler used and its granulometric and compacting properties, but if the surface will be subject to significant chemical stress, it is advisable to apply epoxy paint to the mortar in order to waterproof the surface.

PREPARING THE SURFACE

The surface (concrete or screed) should be slightly rough, solid and free from crumbling. Surfaces which are insufficiently solid or stained with oil should be prepared mechanically, for example by sandblasting, bush-hammering, torching or grinding. Highly effective machinery is available for preparing severely damaged floors (contact us for more details). Surfaces with a cohesion rating of less than 1.5 N/mm should be avoided if subject to significant mechanical stress such as heavy vehicles.

The surface must be dry and dust-free.

APPLICATION

Binder TOPOLINE 911: The binder is supplied in prebatched packages (A = resin, B = hardener). The binder is obtained by thoroughly mixing the two ingredients using an electric mixer; the binder is then poured onto the filler and beaten in a revolving or trough-type mixer.

Fillers: Several types of filler based on quartz sands with different grain sizes are available in premixed form.

Filler 1135: grain size 0 to 1.2 mm, for preparation of mortars of 3 mm or more.

Filler B622: grain size 0 to 2.2 mm, for preparation of mortars of 7 mm or more.

Other premixed fillers can be supplied on request made up to the customer's formula or adapted to conform to specifications.

Fillers 1135 and B622 are produced using an additive which inhibits dust formation when emptying out bags; it is recommended for factory work.

Other, coarser fillers can also be used to fill very deep spaces. Dry granulates of up to 8 or even 16 mm are possible (contact us for details).

Final drying: Mechanically and at 20°C, final mechanical resistance is reached after 3 days. Full chemical resistance is reached after approx. 5-7 days of polymerisation. The process is slowed down at lower temperatures.

Mortar: The binder, prepared as described above, is poured onto the filler.



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Mixing time 3 to 5 minutes. Do not mix for longer in order to avoid warming up the material, as this could considerably accelerate setting.

Application: On the carefully prepared surface, apply the binder with roller or brush, then spread and pour on the mortar, even out, compact, then smooth with a float. A power trowel can be used for smoothing large surfaces (contact us for details).

If the surface is temporarily damp, we recommend the use of binder **TOPOLINE 910 PH** as a primer.

Surface temperature: + 5°C minimum; 25°C maximum.

Working and hardening time

Approx. 30 min at 20°C for a 10 kg mix. May be used gently after 24 hours. Full resistance is reached after approx. 3 days of drying at 20°C.

The above time periods will be longer at lower temperatures and shorter at higher temperatures.

Cleaning tools: TOPCLEAN FORT, TOPCLEAN DOUX and TOPCLEAN LISSAGE.

CONSUMPTION

The consumption rate depends on the nature of the surface and quantity of the filler, and the following data do not allow for variations in roughness.

Primer: approx. 0.2 - 0.4 kg/m

Mortar type 1: in a mix ratio of 1 part binder to 11 parts filler by weight, the consumption of mortar A+B+C is approx. 2.2 kg/mm/m², including 0.170 kg of binder (A+B).

Mortar type 2: in a mix ratio of 1 part binder to 7 parts filler by weight, the consumption of mortar A+B+C is approx. 2.0 kg/mm/m², including 0.250 kg of binder (A+B).

PACKAGING

- **Topoline 911:** 1 kg, 5 kg, 10 kg kits; other sizes on request.
- **Filler 1135:** 22.5 kg bags; other sizes on request.
- **Filler B622:** 27.5 kg bags; other sizes on request.

TYPICAL USES

(for different resin: filler ratios)

1/9: Closed, waterproof system, rapid increase in resistance, ideal for very strong local repairs and as bedding mortar to wet surfaces effectively thanks to the slight sweating from the resin (giving the surface a shiny appearance). For horizontal work only.

1/10: As above, without loss of mechanical properties. Possible at application temperatures of higher than 20 °C.

1/11: Application on very large surfaces or surfaces to which an epoxy paint may be applied to seal pores. Can be compacted with floor polishers. Creation of rounded chamfers in angles.

CHOICE OF HARDENER

R25 rapid hardener can be used for working at low temperature (from + 5 °C) and/or where treated surfaces need to be used very quickly.

STORAGE

Minimum 2 years at room temperature. Avoid temperatures above 30°C.

Check the weight of ingredients A and B after lengthy storage.



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TOOLS

- Two pronged electrical mixer (300 to 400 rpm).
- Planetary blender
- Stainless steel plastering trowel or power trowel with stainless steel palette.

OTHER VARIANTS

Topoline is the overall name for a range of epoxy resins used for protecting floors and walls made of concrete and other similar surfaces.

HEALTH AND SAFETY ADVICE

- The hardener used in **TOPOLINE 911**, as supplied before mixing with the filler, is caustic and harmful to the eyes and mucous membranes; avoid splashing.
- The hardener is harmful to the skin, especially if the skin is cleaned with dilutant or cleaning product and has lost its natural oiliness, or if the user has cuts and sores.
- It is advisable to coat the skin with non-greasy cream before starting work. It is advisable to coat the skin with non-greasy cream and use gloves and protective goggles when mixing the filler and hardener.
- When applying **TOPOLINE 911** in enclosed spaces, ensure sufficient ventilation.
- Clean dirty skin with plenty of soap and water and if necessary with diluted vinegar; finally, apply greasy cream to the skin.
- If itchiness is experienced, consult a doctor immediately.

This technical notice is the outcome of research and long experience. However, we accept no liability for its contents, as successful use of the product depends on taking account of all the circumstances at the time of use. We recommend the performance of preliminary tests in order to see whether the product is suited to the planned application. **UPDATE 11/2004**



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