



CONSOL 71 EP

2-Part Thixotropic Multipurpose Epoxy Adhesive

DESCRIPTION

CONSOL 71 EP is a moisture tolerant, thixotropic, structural two part adhesive and repair mortar. Based on a combination of epoxy resins and special fillers.

RECOMENDED FOR

CONSOL 71 EP may only be used by experienced professionals. As a structural adhesive and mortar for:

- Concrete element
- Polyester, Epoxy
- Mortar, bricks, masonry
- Ceramics, fiber cement
- Hard natural stone
- Steel, iron
- Wood

As a repair mortar and adhesive:

- Corners and edges
- Holes and void filling
- Vertical and overhead use
- Joint filling and crack sealing
- Joint and crack arris/edge repair

BENEFITS

CONSOL 71 EP provides the following properties of benefit such as:

- Easy to mix and apply
- Suitable for dry and damp concrete surface
- Thixotropic: non-sag in vertical and overhead applications
- Good adhesion to most construction materials
- Abrasion resistant
- No primer needed
- Chemical resistant
- Impermeable to liquids and water vapour
- Hardens without shrinkage
- Different colored component
- Sea water resist

PRODUCT DATA

Form

Epoxy Resin

Appearance

Part A: White

Part B: Dark grey

Mixed of A+B: Concrete Grey

Density

2.09 ± 0.1 kg/L (part A+B mixed) (at +23°C)
(evacuated)

Packaging

6 Kg (A+B) Pre-Batched unit

Storage

Dry, shaded place. Protect from direct sunlight and frost. Store in dry condition at temperatures between +5°C and +30°C.

Shelf Life

CONSOL 71 EP can be stored for 12 months if stored as recommend in original unopened container.

TECHNICAL DATA

Compressive Strength

ASTM D 695

Curing Temperatures		
Curing Time	+10°C	+25°C
1 Day	~ 20 N/mm ²	~ 35 N/mm ²
3 Days	~ 50 N/mm ²	~ 52 N/mm ²
7 days	~ 56 N/mm ²	~ 57 N/mm ²
14 days	~ 58 N/mm ²	~ 60 N/mm ²

Flexural

3 Days > 30 N/mm² at 25°C

Modulus of Elasticity in Compression

Compressive

> 4800 N/mm² (14 days at 23°C)

ASTM D 695

Flexural

> 5200 N/mm² (14 days at 23°C)

EN 53452



Theoretical Number of rebar per Pack

Theoretical Number of rebar per Pack (Applies to Solid Substrate)							
1 Pack Volume	Effective Depth (mm)	D8	D10	D12	D16	D20	D24
		Drillingø10	Drillingø12	Drillingø14	Drillingø18	Drillingø22	Drillingø26
6 Kg	8D	1586	1038	732	419	271	190
	10D	1269	830	585	335	217	152
	12D	1015	692	502	298	197	140

Tension Bonding Capacity

Tension Bonding Capacity						
Rebar	D8	D10	D12	D16	D20	D24
Effective embedment (mm)	90	110	125	170	250	300
Tension Bonding Capacity (kN) Safety factor = 1.4	3,23	4,94	6,73	12,21	22,44	32.31

Tensile Strength in Flexural

Curing Temperatures		
Curing Time	+10°C	+25°C
1 Day	~ 12 N/mm ²	~ 19 N/mm ²
3 Days	~ 26 N/mm ²	~ 28 N/mm ²
7 days	~ 28 N/mm ²	~ 30 N/mm ²
14 days	~ 30 N/mm ²	~ 32 N/mm ²

Tensile Adhesion Strength
≥2 N/mm² (CONCRETE FAILURE)

APPLICATION INFORMATION

Mixing Ratio

Part A : Part B = 2 : 1 by weight or volume

Consumption

The consumption of **CONSOL 71 EP** is ~ 2.0 kg/m² per mm of thickness

Layer Thickness

30 mm max.

When using multiple units, one after the other. Do not mix the following unit until the previous one has been used in order to avoid a reduction handling time.

Sag Flow

On vertical surfaces it is non-sag up to 15 mm thickness.

Ambient Air temperature

+10°C min / +40°C max

Dew Point

Beware of condensation.

Substrate temperature during application must be at least 3°C above dew point.

Substrate Temperature

+10°C min / +40°C max

Substrate Moisture Content

When applied to mat moisture concrete, brush the adhesive well into substrate.

Potlife

25°C : ±60 minutes

40°C : ±30 minutes

APPLICATION INSTRUCTION

Substrate Quality

Mortar and concrete must be older than 28 days (depends on minimal requirement of strengths).

Verify the substrate strength (concrete, masonry, natural stone).

Substrate Preparation

The substrate surface (all types) must be clean, dry and free from contaminants such as dirt, oil, grease, existing surface treatments and coatings etc. Steel substrate must be de-rusted similar to 2.5.

The substrate must be sound and all loose particles must be removed. Concrete, mortar, stone, and bricks: Substrate must be sound, dry, clean, and free from laitance, ice, standing water, grease, oils, old surface



treatments or coatings and all loose or friable particles must be removed to achieve laitance and contaminant free, open textured surface.

Steel:

Must be cleaned and prepared thoroughly to an acceptable quality i.e. by blast cleaning and vacuum. Avoid dew point conditions.

Mixing

Pre-Batched units:

Mix part A+B together for at least 3 minutes with a mixing spindle attached to a slow speed electric drill (max.300 rpm) until the material becomes smooth and a uniform grey color.

Avoid aeration while mixing. Then, pour the whole mix into a clean container and stir again for approx. 1 more minute at low speed to keep air entrapment at a minimum. Mix only that quantity which can be used within this potlife.

Application

When using a thin layer adhesive, apply the mixed adhesive to the prepared surface with a spatula, trowel, notched trowel, (or with hands protected by gloves).

When using for bonding metal profiles onto vertical surface, support and press uniformly using props for at least 12 hours, depending on the thickness applied (not more than 5 mm) and the room temperature. Once hardened check the adhesion by tapping with a hammer.

Cleaning Tools

Clean all tools and application equipment with general cleaner after use. Hardened/cured material can only be mechanically removed.

Health and Safety Information

For information and advice on the safe handling, storage and disposal of chemical products, users should refer to the most recent Material Safety Data Sheet containing physical, ecological, toxicological and other safety-related data.

PRECAUTIONS

- **CONSOL 71 EP** contains certain chemicals which can cause skin irritation if exposed and respiratory reaction if inhaled.
- Keep away from open light, including welding.
- Avoid contact with skin and eyes.
- Wear protective glove and eye protection during work.
- If skin contact occurs, wash skin thoroughly.
- If in eyes, hold eyes open, flood with warm water and seek medical attention without delay.