CONSOL®
CONCRETE SOLUTION

TECHNICAL DATA SHEET
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CONSOL 71 FC

2-Part Thixotropic Multipurpose Epoxy Adhesive (Fast Curing)

DESCRIPTION

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

RECOMMENDED FOR

CONSOL 71 FC 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 FC 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

1.7 ± 0.1 kg/L (part A+B mixed) (at +25 ^{0}C) (evacuated)

Packaging

Part A : 4 kg
Part B : 2 kg
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 ^{0}C and +30 ^{0}C.

Shelf Life

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

TECHNICAL DATA

Compresive Strength

ASTM D 695

Curing Temperatures		
Curing Time	+10^{0}C	+25^{0}C
4 Hours	~ 20 N/mm^2	~ 25 N/mm^2
1 Days	~ 45 N/mm^2	~50 N/mm^2
3 days	~ 50 N/mm^2	~ 55 N/mm^2
7 days	~ 55 N/mm^2	~ 60 N/mm^2

Modulus of Elasticity in Compression

Compressive — **ASTM D 695**
>4600 N/mm^2 (14 days at 25 ^{0}C)

Flexural — **EN 53452**
>5000 N/mm^2 (14 days at 25 ^{0}C)

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KIMIA KONSTRUKSI INDONESIA

Tensile Strength in Flexural

DIN EN 53452

Curing Temperatures		
Curing Time	+10 °C	+25 °C
4 Hours	~ 15 N/mm²	~ 20 N/mm²
1 days	~ 25 N/mm²	~ 30 N/mm²
3 days	~ 30 N/mm²	~ 35 N/mm²
7 days	~ 35 N/mm²	~ 40 N/mm²

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 FC** is ~ 1.7 kg/m² per mm of thickness

Layer Thickness

15 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 7 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.

Pot Life

+10 °C : ~20 minutes
+ 25 °C : ~15 minutes
+ 35 °C : ~10 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).
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.

Substrate Quality

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 pot life.

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.