

MORTAR 302i

Quartz Reinforced Composite
Epoxy Grout (High Strength)

GENERAL DESCRIPTION

AXEL MORTAR 302i is a specially formulated double component composite quartz reinforced high strength epoxy grout mortar with anti-skid or rough finish.

AXEL MORTAR 302i is used as a high early strength grout patching for repair, bonding in concrete or metal substrates as in spun pile jointing, concrete square pile, U drain, culverts, manhole, pre-cast beams, bridges, or columns.

RECOMMENDED USES

- * Grout patching to machinery or stanchion column base
- * Bonding to bridge bearing pad, marble or slate floor or wall
- * High early strength repair to car park floor or potholes
- * Repair of honeycomb concrete
- * Expansion of joint edge treatment

CHARACTERISTICS & ADVANTAGES

- * Rapid set with high early compressive strength ≥ 90 MPa in 1 day and ≥ 105 MPa in 7 days
- * Good chemical resistant surface
- * High abrasion and impact resistant properties
- * Very high bond strength to concrete, stones, porous materials and metal

COVERAGE

Theoretical coverage: 2.1kg /m² /mm thick

COLOURS

Light Grey

PACKING

10.40 kg per set (Part A: 10 kg per pail Part B: 0.40 kg per bottle)

STORAGE

Store in a dry, cool and shaded place

CLEANING OF TOOLS

Clean all tools and application equipment with solvent immediately after use.

Hardened or cured material can only be mechanically removed.



SURFACE PREPARATIONS

Remove all grease, oil, grime, flaking paintworks, dirt and dust. Loose concrete and the laitance layer should also be removed. Surface preparation by water-blasting, scabble, dry abrasive blasting or hacking is acceptable. The resulting surface should then be rough, porous and free of all standing water. For more detailed information on surface preparation kindly contact AXELCHEM SDN BHD technical department.

METHOD OF APPLICATION

* Surface preparation:

Ensure that the base is properly prepared, removed of all loose concrete debris, oil, dirt and is then primed with **AXEL PRIMER S** at 50 microns DFT for stubborn surface.

* Floor patching or screeding:

After the floor is prepared, mix **AXEL MORTAR 302i** with Part A and B with a hopper or mixer drill for 5 minutes until the mix is homogeneous. Trowel the mix over the prepared floor with a metal trowel. Use **AXEL SOLVENT 914** to clean trowel before each application for smooth finishing.

* Patching repair or bonding:

(For spun or square piles) After the pile has been hacked or prepared, mix **AXEL MORTAR 302i** with a hopper, mixer drill or hand mix (for small quantity) for 5 minutes and then mould the grout to a "moth ball" and press it over the prepared surface. Use a glove and wet it with soap water to even out the grout to a smooth finish.

Note: Only use spatula hand mixing for small quantity batching

TECHNICAL SPECIFICATIONS

No. of component		Two
Mixing ratio		25:1 (A:B)
Compressive strength	BS EN12390	≥90 MPa (1 day) ≥100 MPa (3 days) ≥105 MPa (7 days)
Flexural strength	ASTM C-580	24 MPa
Tensile strength	ASTM C-307	7.4 MPa
Flexural modulus of elasticity	ASTM C-580	1.65 x 10 ⁵ cm/cm ² 2.35 x 10 ⁵ Psi
Linear coefficient of thermal expansion	ASTM C-531	1.46 x 10 ⁻⁵ cm/cm°C 8.1 x 10 ⁻⁶
in/in°F thermal compatibility to concrete	ASTM C-884	Pass
Linear shrinkage	ASTM C-531	0.0063%
Composite shore D durometer hardness	ASTM D-2240	> 90
Abrasion resistance	ASTM D-4060	0.202 grams max weight loss
Bond strength : excellent - 100% concrete failure		> 2.8 MPa
Cured density		2.1 g/cc 131 lb/ft ³
Volumetric density		476 cc/kg 13.2 lb/in ³
Maximum temperature	Continuous	66°C 150°F
(Dependent on service)	Intermittent-immersion	93°C 200°F

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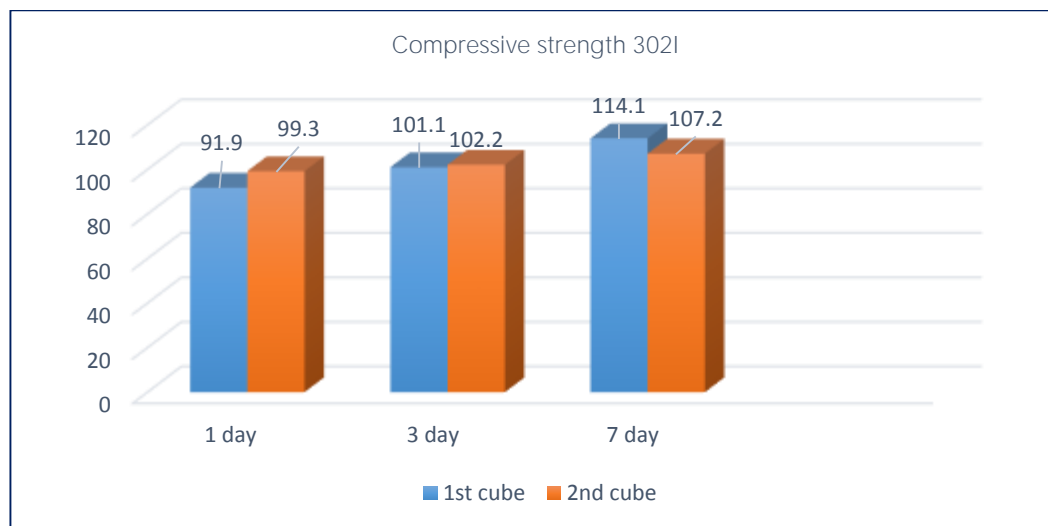
TEST DATA

Compressive strength of 50mm x 50mm x 50mm grout cube

Test method: BS EN 12390 - Part 3: 2009 conducted by Setsco Service (M) Sdn Bhd

Lab's marking	Dimension (mm)			Date cast	Date test	Age at Test	Mass (kg)	Density (kg/m ³)	Maximum load (kN)	Compressive Strength (N/mm ²)	Mode of Failure
	x	y	z								
1	50	50	50	22/09/2020	23/09/2020	1	0.26	2080	229.7	91.9	Satisfactory
2	50	50	50				0.26	2080	248.4	99.3	Satisfactory
3	50	50	50		25/09/2020	3	0.24	1920	252.7	101.1	Satisfactory
4	50	50	50				0.26	2080	255.5	102.2	Satisfactory
5	50	50	50		29/09/2020	7	0.24	1920	285.2	114.1	Satisfactory
6	50	50	50				0.26	2080	268.0	107.2	Satisfactory

Notes: The Mode of Failure is based on the assessment of type of failure shown in figure 1 and figure 2 of BS EN 12390-3 : 2009



SHELF LIFE

12 months from the date of production if stored properly in original, unopened and undamaged sealed packaging in dry conditions.

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