



DURAL 452 GEL - IN

HIGH MODULUS THIXOTROPIC EPOXY ADHESIVE

DESCRIPTION

DURAL 452 GEL - IN thixotropic epoxy adhesive is a two-component solvent free epoxy resin system consisting of an off white or white Base and black Hardener in preweighed quantities for easy onsite mixing. DURAL 452 GEL - IN is a 100% solids, Non-corrosive, moisture insensitive, high strength epoxy adhesive and binder for numerous applications. This high modulus, structural gel is perfect for bonding applications that require a non-sag adhesive.

PRIMARY APPLICATIONS

- Bonding of concrete, masonry, steel, and flexible polyolefines taps
- Anchoring bolts, dowels, or pins
- Pick-proof sealant for jails/prisons and kennels
- Bonding segmented concrete bridges
- Excellent squeezability
- High bond strength
- Fast cure
- Tolerant to damp surfaces

FEATURES/BENEFITS

- Exceptional adhesion to construction materials
- Perfect for vertical and overhead bonding
- Easy to use 1:1 mix ratio by weight
- Moisture insensitive
- Superior strength
- Wide range of temperature applications
- Provides exceptional adhesion for both horizontal and vertical surfaces
- Easy to use preweighed pack system
- Moisture insensitive
- High bond strength adhesive

TECHNICAL INFORMATION

Material properties tested under laboratory conditions @ 27°C, 50% RH.

PROPERTIES	VALUE
Appearance	Light Grey colour viscous paste
Mixed Density	1.600 - 1.650 g/cc
Pot life	45 – 60 minutes
Compressive Strength	1 day - 40 MPa (ASTM D695 50mm cube) 7 days - 75 MPa (ASTM D695 50mm cube)
Tensile bending Strength	Concrete failure
Bond Strength	7 days -15 MPa (ASTM D882) 14 days - 20 MPa (ASTM D882)

PACKAGING

DURAL 452 GEL - IN is packaged in 5 kg pack. The mix ratio is 1:1 by wt.

SHELF LIFE

12 months in original, unopened containers

SPECIFICATIONS/COMPLIANCES

Complies with ASTM C881, Type I, II IV, V, Grade 3, Class C

COVERAGE

The coverage rate as a bonding agent is approximately 3.0 to 3.5 kg/m² at 2mm thickness.

Note: Coverage rates are approximate. Actual coverage depends on temperature, texture, and substrate porosity.

DIRECTIONS FOR USE

Surface Preparation:

Concrete: The surface must be structurally sound, dry, free of grease, oils, coatings, dust, curing compounds and other contaminants. Surface laitance must be removed. The preferred method of surface preparation is abrasive blasting or other mechanical means per ICRI Guideline 310.2. Oil contaminated surfaces should be degreased. Remove defective concrete down to sound material. Following surface preparation, the cleaned surface should pull concrete when tested with a pull tester, or an elcometer (ASTM D 4541).

Steel: All oils, grease, dirt, old coatings and chemical contaminants must be removed. The surface should be blasted to a near white metal finish (SSPC SP10) using clean, dry aggregate.

Mixing: Premix Part A and B with a slow speed motor and "Jiffy" mixer. Pour one part by weight of Part A and one part by weight of Part B into a clean, dry container and mechanically mix for 3 to 5 minutes. Scrape the sides and bottom of mixing container while mixing. Do not whip or aerate while mixing.

Scrape the bottom and sides of the containers at least once during mixing. Do not scrape bottom or sides of the container once mixing operations have ceased; doing so may result in unmixed resin or hardener being applied to the substrate. Unmixed resin or hardener will not cure properly. Do not aerate the material during mixing.

Application and surface temperatures should be at least 10 C and rising. Bonding hardened to hardened concrete: Apply mixed DURAL 452 GEL - IN by spatula or trowel. Ensure the surfaces to be joined have uniform applications of DURAL 452 GEL -IN.

Join surfaces and hold or clamp firmly until adhesive sets. Ideally a small amount of adhesive should exude from the joint. Surfaces must be mated while the adhesive is still tacky. The mixed adhesive is applied to both surfaces to be bonded with a serrated trowel or other suitable spreader. The joint should be closed immediately, if this is not achieved the surface of the adhesive should be slightly scratched immediately prior to closing the joint to expose fresh adhesive. The joint must be closed within the open time of the adhesive. On site monitoring of the operation using lapped asbestos cement panels is recommended.

Anchoring bolts, dowels, pins: DURAL 452 GEL - IN can be to anchor horizontal bolts. The anchor bolt hole should be free of all debris before grouting.

Vertical and overhead repairs: Mix the DURAL 452 GEL - IN into an epoxy mortar with the appropriate amount of dried silica sand.

CLEAN UP

Clean tools and application equipment immediately after use with EUCO SOLVENT or Acetone while still wet. Hardened epoxy will require removal by mechanical means

PRECAUTIONS/LIMITATIONS

- Wear proper eye & skin protection when using any epoxy product
- Store at temperatures between 10°C to 32°C
- Do not dilute with any solvent
- Protect from moisture
- Surface and ambient temperatures must be 10°C and rising at time of use
- In all cases, refer the Safety Data Sheet before use