



## TECHNICAL DATA SHEET (TDS)

### epoGRANIT 2001 - EPOXY ADHESIVE

#### 1. PROPERTIES

**EpoGranit 2001** is a multi-purpose epoxy based adhesive formulated for using in constructions for bonding, filling, reinforcing applications and metal anchorage installations that requires high bonding strength and bearing capacity. It is a non-sage, paste form, structural epoxy filling paste and adhesive with 1:1 mixing ratio. It hardens in 45 min. and features high bonding strength and bearing capacity. It is ideal for bonding, filling, repairing and civil engineering applications.

- Easy to use
- Smooth and easily workable
- Simple 1:1 mixing ratio
- Non-sag on vertical or overhead surface
- Very high strength permanent bonds
- Tensile and compressive strength superior to concrete
- Excellent chemical resistance

#### 2. APPLICATION AREAS

It is ideally suited for: Pre-cast concrete articles, grouting bolts, natural stones, bricks and ceramics, metal fiberglass articles, concrete floors and stairs, concrete columns, institute formed concrete.

#### APPLICATION FOR MARBLE, GRANITE AND OTHER STONES

The spot fixing technique creates a ventilated cavity between the panel and wall. This provides thermal, acoustic and dampness insulation to the structure and makes open joint cladding practical.

Non-slag properties of Epo Granit 2001 allow stonemasons to install panels at varying distances from the wall and fix vertical or inclined surfaces as called for by design.

Elasticity of Epo Granit 2001 allows movements due to seismic activity and vibrations encountered in elevators and lift lobbies.

Epo Granit 2001 is ideal for use in stone prefabrication and artisan work.

Epo Granit 2001 does not stain or dehydrate even the most sensitive types of marble.

Epo Granit 2001 strengthens and improves durability of intricately weak types of stones by sealing the cracks and faults, which could otherwise cause problems during and after installation.



In high-rise installations can be securely fixed with EpoGranit 2001. This technique insures against wall material failure by distributing stress due to panel weight into the interior of the wall.

Very heavy panels in high-rise installations can be securely fixed with Epo Granit 2001 using stainless steel wire ties or anchors.

Epo Granit 2001 frees the stonemasons from need to handle heavy bags of sand and cement and fixing with bolts.

### 3. INSTRUCTIONS FOR USE

1. Surfaces to be bonded must be clean and strong.
2. At the bonding spots concrete should be lightly scabbed to ensure strong substrate.
3. In case of weak wall material, such as old weathered concrete, multi-cavity bricks or pre-cast concrete hollow blocks, the use of pins or anchors with Epo Granit 2001 is mandatory.
4. The marble and granite panel surface must be clean and dry.
5. Abrade lightly with an angel grinder (disc grinders areas to be spot bonded with EpoGranit 2001).
6. Holes for pin insertions into stone should be drilled with a drill without the use of impacts facility, to avoid fracturing the holes must be blown out with clean air to make them dust free.
7. Quantity of EpoGranit 2001 required to fix panels vary according to size and weight of the panels. Without the use of pins or ties, minimum 10% of the panel surface area should be bonded.
8. For example, panel 1 meter long, 0.5 meter wide and 0.03 meter thick, weighs 40kg. Typical gap between the panel and wall is 10 mm. Area of the panel is 0.5 square meter. Five spot applications Epo Granit 2001 each 100mm x 100mm and 10mm thick will give total bond over 10% of the area of the panel. Epo Granit 2001 requirement will be 5 x 0.1 liter total. The applications should be at corners and at center of the panel.
9. In the above example the shear load on EpoGranit 2001 is 0.08 Mpa. At permanent stress levels below 5 Mpa, any deformation caused by surges in positive or negative loads by strong winds or other forces will be fully elastic and no creep will occur. Short duration stresses of 20 Mpa and over will not cause any creep or change in strength of the assembly. This has been confirmed by extensive reliability of Epo Granit 2001 fixing system in cyclone affected areas such as Hong Kong and North America is essential that the panel weight is transmitted onto as large area of the wall surface as possible. The strength of the wall is of great importance and if doubt exists about the quality of the wall, use pins are advisable.
10. Typical pull out strengths of stainless steel pins embedded into 40 Mpa concrete and granite.



11. 10mm diameter stainless steel anchor embedded 50mm into concrete with pull out = 50kns concrete failed 3mm diameter stainless steel pin embedded 3mm into granite with pull out = 7kn granite failed.
12. Cured EpoGranit 2001 is a stone like, yet elastic, chemically inert, high strength solid does not change on aging. The hardened product is stress free and retains strength and elasticity over a range of temperatures from above 90°C to as low as -30°C without softening or embitterment.

#### 4. TOOLS REQUIRED FOR APPLICATION

#### 5. PACKAGING

PRODUCT CODE	VOLUME	PACKAGE
Can	1 Kg (A + B)	12
Can	2 Kg (A + B)	12
Metal Bucket	5 Kg (A + B)	4
Metal Bucket	200 Kg (A + B)	-

#### 6. STORAGE AND SHELF LIFE

#### 7. CAUTION

#### 8. SAFETY MEASURES

#### 9. TECHNICAL DATA

Consistency	: Non sag paste
Color	: White
Mix Ratio A:B	: 1:1 ( Volume )
Pot life at 25°C	: 45 minutes
Loading time	: 120 minutes (25°C)
Full cure at 25°C	: 24 hours
Minimum application temperature	: 10°C



Tensile shear strength	: > 20 Mpa
Elastic deformation at 20 Map shear stress	: 2.5%
Tensile bond strength	: 10 Mpa
Compressive strength	: 80 Mpa
Flexural strength	: 15 Mpa
Coefficient of linear expansion	: 40 mm per oC 10-6