GENERAL CHEMICAL ENGINEERING

UNI EN ISO 9001:2008
Quality System Certified Company

TECHNICAL DATA SHEET

PRODUCT

RTN 50

EPOXY ADHESIVE FOR PUTTYING STONE SLABS
Low viscosity, very good transparency

Liquid bi-component epoxy adhesive, solvent free and perfectly transparent (GARDNER colour max. 2), with low viscosity and self-levelling for strengthening and puttying stone slabs; applicable by manual or automatic system and with oven of 100-120 minutes. Very low odour when applying. Very stable to the atmospheric agents and UltraViolet rays and suitable for exterior.

USE

For puttying, strengthening and resin-bonding marble, granite, natural and artificial stone slabs.

PREPARING THE SURFACE

The pieces to be treated must be porous, clean and dry, as well as free of dust, oils and foreign matters.

COMPOSITION

COMPONENT **A**: Bisphenol A epoxy resin with reactive diluent.
COMPONENT **B**: low viscosity cycloaliphatic polyamine

MIXING RATIO (IN WEIGHT)

COMPONENT **A** : COMPONENT **B** = **100 : 50**
(i.e. 100 grams of comp. A mixed with 50 grams of B)
Epoxy adhesives require exact resin/catalyst mixing ratios

ACTIVE SUBSTANCE CONTENT	%	100
DENSITY AT 25°C (77°F)	g/cm^3	1.03
FLASH POINT	°C (°F)	113 (235)
TIME OF USE AFTER MIXING (TEST OF 200 GR. AT 25°C [77°F])	minutes	30-40
AIR DRYING TIME (RH 50% 25°C[77°F])		
HIGH THICKNES 5 MM	hours	3-4
LOW THICKNES 100 µM	hours	5-6
USE TEMPERATURE	°C (°F)	>5 (>41)
MINERAL FILLERS		absent

IMPORTANT: The reaction of catalysis (hardening) requires temperatures higher than 8°C-10°C (46°F-50°F).

APPLICATION: using a spatula or by spreading

THICKNESS: recommended between 2 to 6 mm.

CONSUMPTION: 250-800 g/m^2 depending on material porosity

HARDENING

The speed of polymerisation / hardening increases with the temperature; anyway, when applying the product, the temperature must not be lower than 8°C-10°C (46°F-50°F). The product hardens in **8-10** hours and can be worked (grinded, polished etc.) after **16-24** hours.
The catalysis is fully completed after 24-36 hours.

SHRINKAGE ON HARDENING: 0,25%

CHEMICAL RESISTANCE (Variations in % weight on diskettes after 21 days soaking at 25°C [77°F]).

DISTILLED WATER	1.4
SODIUM HYDROXIDE 10%	1.1
ACETIC ACID 10%	8.1
HYDROCHLORIC ACID 10%	1.7
SULPHURIC ACID 10%	3.2
METHYLISOBUTYLKETONE	4.8
XYLENE	1.0
ETHANOL 96%	11.3

STABILITY

The product must be kept in closed and sealed containers. If the containers are not properly closed, component B can absorb humidity and carbon dioxide which, during hardening, could produce air bubbles and opalescence. It is also best to store the products at temperatures above 10-15°C (50-59°F) or condition these to such temperatures before use to prevent any increase in viscosity.

SAFETY see Material Safety Data Sheet

MECHANICAL SPECIFICATIONS

(after 10 days' hardening at 25°C[77°F])

FLEXURE MAXIMUM LOAD	N/mm^2	96
FLEXURE MODULUS OF ELASTICITY	N/mm^2	4300
COMPRESSION ATTRITION LOAD	N/mm^2	137
COMPRESSION MODULUS OF ELASTICITY	N/mm^2	3050
TRACTION BREAKING LOAD	N/mm^2	50
TRACTION BREAKING EXTENSION	%	1.2
HDT	°C (°F)	62 (143)
HARDNESS	Shore D15	84

REMARKS: Epoxy adhesive compounds have excellent setting characteristics even on slightly damp surfaces. The low shrinkage (0.1-0.5%) causes only limited stress both during and after hardening, thereby favouring greater gluing and material stability. Once hardened they are totally resistant to frost and water so they are also ideal for exterior use. The prolonged direct sunlight action can however causes the resin to turn yellow. Thanks to the great adhesive flexibility heterogeneous materials such as concrete, steel, wood, many plastic materials, natural and artificial stones can be glued together, including in alternate layers.

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