EPOX RIPRESA

TWO-COMPONENT, POURABLE, EPOXY STRUCTURAL ADHESIVE FOR COLD JOINTS AND REPAIRS

DRACO

REFURBISHMENT and **PROTECTION** LINE

ADHESIVE RESINS FOR COLD JOINTS AND REPAIRS

CE EN 1504-4 | STRUCTURAL BONDING STELL and CONCRETE | SOLVENT FREE | HIGH PENETRATION | DRACO USABILITY PROGRAM

EPOX RIPRESA is a two-component solvent-free epoxy resin. Thanks to its fluid consistency, **EPOX RIPRESA** can be easily applied by casting and it is ideal for cold joints, structural bonding and filling cracks in concrete.

EPOX RIPRESA cures without shrinkage and, once it has hardened, it is waterproof and exhibits dielectric properties, high mechanical strength and excellent adhesion to concrete and steel.
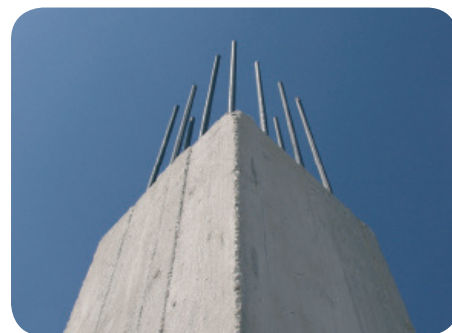
BENEFITS

EPOX RIPRESA is a two-component fluid structural epoxy adhesive having the following characteristics:

✓ **HIGH BOND STRENGTH: EPOX RIPRESA** provides superior adhesion to concrete, steel and most common materials used in building; **EPOX RIPRESA** is also suitable for bonding together different materials.

✓ **HIGH CHEMICAL RESISTANCE:** Once **EPOX RIPRESA** has completely cured, it is impermeable to water, salts hydrocarbons, acid and alkaline solutions.

✓ **ABSENCE OF SHRINKAGE:** The solvent-free formula of **EPOX RIPRESA** ensures polymerization without any shrinkage.

✓ **EASY TO APPLY:** The high fluid paste consistency of **EPOX RIPRESA** makes it quick and easy to apply by roller, spray or casting.

✓ **IT WITHSTANDS MOIST SUBSTRATES:** The latest generation special polymer formulation of **EPOX RIPRESA** makes it withstand substrate moisture.

AREAS OF APPLICATION

EPOX RIPRESA is a fluid epoxy structural resin which is ideal for:

✓ Cold joints between fresh and cured concrete on industrial floorings, screeds, etc.

✓ Mortar or concrete thick lift on floorings or existing concrete slabs.

✓ Topping by "wet on dry" method even with polished effect.

✓ Cold joints of rigid waterproof junctions.

✓ Structural reinforcement of vaults, beams and floor slabs using the beton-plaqué technique.

✓ Structural bonding of concrete elements, reinforced concrete, pre-stressed reinforced concrete or steel-concrete bonding.

✓ Sealing cracks in concrete by casting.

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EPOX RIPRESA

SUBSTRATES PREPARATION

▸ Surfaces shall be perfectly cleaned, uniform and free of residues, loose and crumbling parts. Remove dirt, efflorescence, oils, form-release agents, previous coatings or crumbling parts by sandblasting.

▸ Remove any rust or debris from metal surfaces by sandblasting until achieving white metal.

▸ Any hole, crack or fissure shall be previously sealed (using EP FIX , EPOMALT, EPOX INIEZIONE).

HOW TO USE

COMPONENTS PREPARATION

The two components of **EPOX RIPRESA** are provided in two separate packages:

▸ A-RESIN

▸ B-HARDENER

Both components must be thoroughly mixed, each in its own container. Do not use partial quantities: a wrong mixing ratio could cause damage during the hardening process.

Pour component B in a suitable container and then add component A. Mix for 4-5 minutes with a low-speed drill and suitable ground plate till getting a well-blended and free of lumps mix.

APPLICATION

As **EPOX RIPRESA** is a semi-fluid slightly thixotropic product, it can be applied even vertically by brush.

COLD JOINT

The application of **EPOX RIPRESA** on dry or moderately moist substrates should be carried out immediately after mixing the two components. Pay particular attention when applying on uneven or hard-to-reach areas, until covering the entire surface to be bonded. The fresh concrete casting shall be performed within 1-2 hours of product application depending on the room temperature.

SEALING OF CRACKS

In the presence of cracks greater than 0.5 mm **EPOX RIPRESA** can be applied by casting. If the thickness is less than 0.5 mm, the crack should be enlarged and dedusted before applying **EPOX RIPRESA**.

PRIMER

EPOX RIPRESA can be used to promote adhesion to different epoxy systems. Subsequent synthetic finish coatings shall be applied after a minimum time of 12 hours and not later than 24 hours.

WARNINGS

▸ Do not use **EPOX RIPRESA** when the outdoor and substrate temperature is less than +5°C.

▸ Do not apply **EPOX RIPRESA** on damp surfaces (slight humidity is tolerated).

▸ Do not cast fresh concrete on hardened **EPOX RIPRESA**.

▸ Do not apply **EPOX RIPRESA** on dusty, incoherent or crumbling substrates.

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EPOX RIPRESA

PACKAGING AND STORAGE

EPOX RIPRESA is available in:

▸ 1 kg Pail + 0.3 kg Pail = (A + B) 1.3 kg

▸ 5 kg Pail + 1.5 kg Pail = (A + B) 6.5 kg

▸ 10 kg Pail + 3 kg Pail = (A + B) 13 kg

If the product is stored properly in its original packaging, indoors in a dry location, at a temperature of not less than + 10°C, it maintains its original features for one year.

TECHNICAL SPECIFICATIONS AT 20° C

APPEARANCE	Fluid paste
DENSITY - EN ISO 2811	Comp. A 1.40 Comp. B 0.95
PACKAGING	1 + 0.3 = 1.3 kg 5 + 1.5 = 6.5 kg 10 + 3 = 13 kg
STORAGE	12 months

APPLICATION DATA 20°C - 50% R.H.

MIXING RATIO	A:B=1:0.3
CONSISTENCY OF MIX	Fluid paste
A + B DENSITY - EN ISO 2811	1.26 kg/l
BULK VOLUME - UNI EN 12190	1.23 kg/l
WORKABILITY TIME - EN ISO 9514	60 min at 20°C 90 min at 10°C
OPEN TIME - UNI EN 12189	90 min
HARDENING TO TOUCH	24 hours
TOTAL CURE TIME	7 days
APPLICATION TEMPERATURE RANGE	from +5°C to +30°C
CONSUMPTION	Cold joint: 400 - 800 g/m^2 depending on the porosity of the substrate. Primer: 150 - 300 g/m^2 depending on the porosity of the substrate.

FINAL PERFORMANCE - ACCORDING TO UNI EN 1504-4 STRUCTURAL BONDING

PERFORMANCE CHARACTERISTIC	TEST METHOD	REQUIREMENTS ACCORDING TO EN 1504-4	PRODUCT PERFORMANCE
LINEAR SHRINKAGE	EN 12617 - 1	≤ 0.1 %	0.01 % (at +21°C)
COMPRESSIVE MODULUS OF ELASTICITY	EN 13412	≥ 2.000 MPa	2700 MPa
FLEXURAL MODULUS OF ELASTICITY	UNI EN ISO 178		3100 MPa
COEFFICIENT OF THERMAL EXPANSION	EN 1770	≤ 100 x 10^{-6} /K (measured from -25°C to +60°C)	27 x 10^{-6} /K
GLASS TRANSITION TEMPERATURE	EN 12614	≥ +40°C	62°C
DURABILITY (freeze/thaw cycles and moist heat)	EN 13733	compressive shear load > tensile strength of concrete no failure of steel test sample	meets specification
BONDED MORTAR OR CONCRETE (wet on dry and dry on dry)			
ADHESION TO CONCRETE	EN 12636	concrete failure	meets specification
SENSITIVITY TO WATER	EN 12636	concrete failure	meets specification
SHEAR STRENGTH (N/mm²)	EN 12615	≥ 6	> 9
COMPRESSIVE STRENGTH	EN 12190	≥ 30 MPa	50 MPa
STRENGTHENING USING BONDED PLATE			
SHEAR STRENGTH	EN 12188	≥ 12 MPa	18.2 MPa

ITEM SPECIFICATIONS

Cold joints between fresh and cured concrete, bonding precast elements and sealing screed cracks using **EPOX RIPRESA**, the two-component pourable epoxy resin of **DRACO Italiana S.p.A.** by applying it by brush, spatula or by casting, in order to ensure structural bonding between new and old concrete. The product shall be applied according to manufacturer's instruction and meet the minimum requirements established by EN 1504-4.

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