

PRODUCT NAME
Rotafix Structural Adhesive (RSA)

400cc pack (3552) - 3ltr pack (3113)

Product Description

Rotafix Structural Adhesive (RSA) is a thixotropic, structural two part adhesive based on a combination of epoxy resins and special micro fillers, designed with a long open time for the bonding of timber, masonry and concrete.

Uses

As a structural adhesive : for wood , concrete elements, hard natural stone, bricks, masonry steel, iron, aluminium, holes and void filling, Plate bonding for timber and concrete can be used vertical and overhead situations for filling of cracks and shakes and the installation of anchors in most substrates.

Characteristics/Advantages

RSA Adhesive has the following advantages: Easy to mix and apply, excellent adhesion to most construction materials. High strength thixotropic adhesive, low modulus system, non-sag in vertical and overhead applications, solvent free, cures without shrinkage, high ultimate strength.

Tests

Approval/Standards
Testing according to ISO 15274

Product Data

Colours:

Base part : White paste

Hardener : Off white paste

Care must be taken to ensure complete and thorough mixing of both pastes as they are similar in colour

Packaging:

Supplied in 400cc pre batched packs consisting of 2 x plastic screw cap jars and an empty cartridge set & follower plate

Supplied in 6 x 400cc pre batched packs all in one box c/w empty cartridge sets and follower plate

Supplied in 1 x 3ltr pre batched pack in 2 x plastic buckets (no cartridge sets supplied with this pack)

Storage conditions:

Shelf Life is 24 months from date of production if stored properly in original unopened, sealed and undamaged packaging, in dry conditions at temperatures between +5°C and +25°C. Protect from direct sunlight. Keep off cold floors and protect from frost.

Chemical Type:

Thixotropic epoxy base, including its curing agent

Density 1.18 + 0.01 kg/ per pack (base & hardener mixed) (at +20°C)

Compressive Strength
(According to ASTM D695)

Curing time	+ 20 ° C
7 days	30 – 40 N/mm ²
11 days	40 – 50 N/mm ²
14 days	50 – 60 N/mm ²

Mechanical/Physical Properties

Property	Units	Test Method	Result Mean
Tensile Strength	N/mm ²	BS EN ISO 527-2	12.75
Bond Strength *50% of Ultimate	MPa	BS EN 1465	>20
Environmental Durability	MPa	BS EN ISO 9142	>21
Environmental Conditions	24hrs at 24 °C & 90% RH 72hrs at 24 °C & 90% RH	24hrs at 40°C & 30%RH 48hrs at 40°C & 30%RH	Timber Species tested on tropical hardwood
Bond Strength on adhesive to tropical hardwood 'Jarrah'	MPa	BS EN 1465	>9
Bond Strength on adhesive to common UK structural timber, CLT, Glulam, Douglas Fir	MPa	BS EN 1465	>6

Elongation at break	%	BS EN ISO 527-2	16.03
Crack Extension	mm	ASTM D3762	13.94
Temperature of Deflection Under Load	°C	BS EN ISO 75-2	<23.0
**Pot life 100 G @ 20°C	Minutes	EN 14022	50
**Cure time 100 G @ 20°C	Days	EN 14022	300

**Pot life and cure times will vary dependant on ambient temperature and humidity

System Information

Consumption/Dosage:

The volumes are stated on the packs. As a guide 400cc pack of mixed RSA at an adhesive thickness of 1mm thick will cover 0.4m² of timber. As a guide for crack injection 400cc pack would fill 5 linear meters of a crack 3mm wide x 25mm deep.

Substrate Quality:

All types substrate must be clean, dry and free from contaminants such as dust, dirt, oil, grease, existing surface treatments and coatings etc. Steel substrates must be de-rusted to Sa 2.5 standard to maximise adhesion. The substrate must be sound and all loose particles must be removed.

Substrate Preparation:

Old surface treatments or coatings and all loose or friable particles must be removed to achieve a laitance and contaminant free, open textured surface. Steel: Must be cleaned and prepared thoroughly to an acceptable quality i.e. by blast cleaning and vacuum.

Application Conditions/Limitations

Substrate Temperature: +8°C min. / +30°C max.

Ambient Temperature: +5°C min. / +30°C max.

Material Temperature: RSA must be applied at temperatures between +10°C and +30°C

Substrate Moisture Content: . Avoid dew point conditions. Always check the moisture content of the timber to which you are adhering to, do not fix in timbers that are over 20% M/C – Please ring our Technical Department for specific information.

Application Instructions

Mixing:

Add the total contents of the smaller container (curing agent) to the (base) and mix the pastes thoroughly using a flat end pallet knife, reference 3642 to give a homogenous one colour mix.

Place the follower-plate onto the surface of the mixed material ensuring it fits parallel in the tub with the outer and central lip pointing upwards.

Cut the seal from the front end of the cartridge sleeve. Place the back of the cartridge vertically and centrally over the hole in the follower-plate. Press the cartridge firmly and continuously down on to the follower-plate until the follower-plate bottoms on the mixing tub base. Carefully remove and invert the now full cartridge. Screw on the front injection nozzle plus any chosen injection tube assembly. Finally, insert the rear plunger.

Where applicable, install the full cartridge of RSA into the injection gun. Alternatively for spreader application as an adhesive, dispense directly from the cartridge without the aid of the front nozzle or injection tube.

Pallet knife Ref: 3642. 400cc Injection gun Ref: 3667. Available from Rotafix

Mixing Time:

Mix the Base & Hardener parts together for at least 3 minutes with a pallet knife until the material becomes smooth in consistency and uniform in colour.

Mix only 1 complete pack at a time or the quantity which can be used within its pot life.

Please note: Rotafix Structural Adhesive (RSA) 3ltr pack must be mixed using a slow speed drill and mixing paddle for at least 2-3 minutes to achieve a smooth consistency and uniform in colour.

Cleaning of Tools:

All tools and application equipment can be cleaned with thinners or solvent wipes immediately after use. Hardened and or cured material can only be removed by mechanical means.

Health and Safety & Legal Information

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The requirements for a Rotafix product(s) may be specific for an individual project. Advice given by Rotafix can only be considered as part of the contract if it is provided in writing.

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