

# MasterStrength 2525 (formerly MasterEmaco 2525)

Solvent free epoxy binder, structural adhesive and crack injection

## Material Description

**MasterStrength 2525** is a solvent free, high performance, versatile epoxy binder that can be used to produce a range of epoxy resin based mortars, structural adhesives or for crack repairs and injection. **MasterStrength 2525** can be applied to both dry and damp surfaces and adheres to most substrates after proper preparation.

## Areas of Application

- Structural bonding of new to old concrete.
- Production of epoxy resin mortars for floor toppings.
- Production of epoxy resin mortars to grout bolt holes.
- Steel bonding.
- Rapid structural repair of concrete.
- Grouting dowels, hold down bolts and starter bars.
- Priming of concrete substrates prior to applying MasterCoat Flooring systems or MasterCrete repair mortars.
- Priming of reinforcing mesh and concrete substrates in concrete repair applications when structural bonding required.
- For crack repairs and injection.

## Characteristics and Benefits

- Adheres to wet or damp surfaces - wide application area.
- Solvent free - low VOC and non-shrink.
- Pre-proportioned packaging - no job site errors.
- Multi-purpose binder - many uses.
- Low viscosity - easy to apply as primer.
- High abrasion and chemical resistance - can be used as wearing surface.
- Approved to AS/NZS 4020:2018 (tested to the maximum exposure level) - suitable for contact with potable water.
- Cures hard at low temperatures - wide application range.

## Properties

| Mixed resin and hardener only   | @ 23°C                         |
|---------------------------------|--------------------------------|
| Compressive Strength 7 days     | 95 MPa                         |
| Flexural strength 7 days        | 40 MPa                         |
| Tensile strength 7 days         | 60 MPa                         |
| Compressive Strength 24 hrs     | 58 MPa                         |
| Heat deflection temp            | 80°C                           |
| Compressive modulus             | 3.4 GPa                        |
| Bond strength                   | >2.5 MPa<br>(concrete failure) |
| Abrasion Resistance ASTM C779   | 0.24mm/30 mins.                |
| Mortar Performance (A+B+filler) | @ 23°C                         |
| <b>Fluid Grout F I Filler</b>   |                                |
| Compressive strength            | 80MPa                          |
| Tensile strength                | 50MPa                          |
| Flowable Mortar F I Filler      |                                |
| Compressive strength            | 75MPa                          |
| Tensile strength                | 42MPa                          |
| <b>Mortar F I Filler</b>        |                                |
| Compressive strength            | 64MPa                          |
| Tensile strength                | 36MPa                          |

## Chemical Resistance

**MasterStrength 2525** resists most common organic and inorganic acids in diluted form, also resistant to alkalis, water, oils, grease, etc. Chemical resistance depends on the chemicals involved, their concentration, temperature and degree of exposure. Good housekeeping practices such as immediate clean-up of all spillages will greatly extend the service life.

|                                     | Part A | Part B | Mixed    |
|-------------------------------------|--------|--------|----------|
| Supply form                         | Liquid | Liquid | Liquid   |
| Colour                              | Clear  | Amber  | Amber    |
| Mix Ratio                           |        |        | 3:1 pbv  |
| Density (Mixed)                     |        |        | 1.1 kg/L |
| Application Temperature: 5°C - 35°C |        |        |          |

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## Application

### Surface Preparation

Remove all grease, oil, dust, residual curing compound, mould release agent or other contaminant that could impair adhesion. Laitance should preferably be removed by captive shotblasting or hydro-jetting. Mechanical wire brushing may be appropriate for small areas.

Spalled concrete should be cut back to sound concrete and made good with **MasterStrength 2525** mortar. Conventional concrete curing compounds should be removed before application.

### Mixing

Proportion part kits accurately mixing only what can be used in less than 30 minutes. Thoroughly stir Part A, add Part B (3:1 parts by volume respectively) and blend thoroughly using a slow speed mixer fitted with a suitable paddle. When being used as a grout or mortar, only clean kiln dried sand may be mixed in. The maximum aggregate size should approximate to 1/3 of the minimum required depth. Add **MasterCoat 2400** colour packs into floor screeds to ensure colour throughout flooring system. The following mix ratios are given as a guide. Consideration should be given to the volume of mortar and potential problems associated with exothermic reactions.

### Application

The **MasterStrength 2525** mortar or grout may be placed on to the surface using standard grouting or trowelling techniques. Note: The surface needs to be primed when using "dry" mortars.

Use **MasterStrength 2525** binder only to prime and apply wet on wet, when aggregate ratio is over 1-3, resin to aggregate. Should **MasterStrength 2525** cure when priming, seed with F1 or F5 filler.

### Curing

Cure time will vary depending on the ambient temperature, quantity mixed and placed, and the rate of **MasterCoat Fil I** (sand) addition. **MasterStrength 2525** will have fully cured after 7 days at 23°C.

## Estimating Data

### As a binder for mortars and grouts

|                                                                                        |          |             |
|----------------------------------------------------------------------------------------|----------|-------------|
| Mixed <b>MasterStrength 2525</b> with added MCoat Fil I Filler by volume as per below: |          | Total yield |
| Grout                                                                                  | 2 litres | 2.25 litres |
| Flowable mortar                                                                        | 3 litres | 3 litres    |
| Mortar                                                                                 | 4 litres | 4 litres    |

### As a primer, adhesive and injection resin

| MasterStrength 2525 coverage and yield |                    |
|----------------------------------------|--------------------|
| Primer                                 | Wet to dry bonding |
| 4-6 m <sup>2</sup> /L                  | 4m <sup>2</sup> /L |

The coverage for primer or wet to dry bonding depending on profile of concrete.

## Packaging

**MasterStrength 2525** comes in 2 litre, 20 litre and 800L kit sizes.

## Storage & Shelf Life

**MasterStrength 2525** can be stored in tightly closed original containers for 24 months at moderate temperature.

## Precautions

For the full health and safety hazard information and how to safely handle and use this product, make sure that you obtain a copy of the Safety Data Sheet (SDS) from our office or website.

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## Disclaimer

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### STATEMENT OF RESPONSIBILITY

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