

Technical Data Sheet



Rapidcote Rapid Cure Coating System

DESCRIPTION:

Rapidcote is a two-part formulation consisting of Resin and a Hardener. Rapidcote is very different from all other systems. Normally; to achieve short cure times, the pot-life becomes very short and hence difficult to use.

Rapidcote has two very specific characteristics.

Short cure time after application
Long Pot Life

TYPICAL FEATURES | BENEFITS:

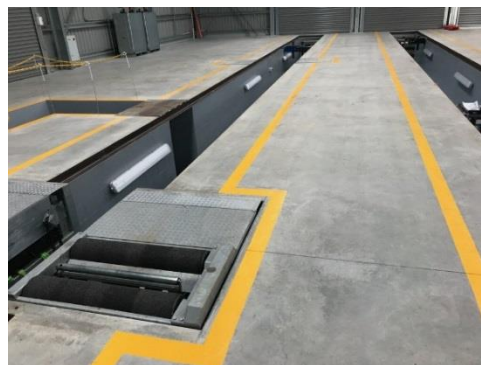
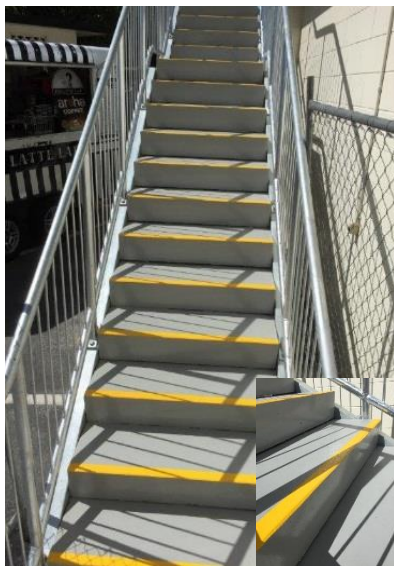


- Long Pot Life - will save cost as materials will not be wasted by pre-curing in-pail
- Short cure time after application –rapid return to in service requirements.
- Very good abrasion and scuff resistance.
- Very good UV stability
- Easily cleaned.
- Excellent adhesion to properly prepared substrates.
- Excellent slip resistance. Specification is needed of the degree required.

**** Note****

Please read detail contained within document.

- Cured Film is non-toxic.
- Not moisture permeable.
- Colour: See colours listed below.



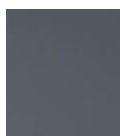
COLOURS:

Rapidcote is available in the following colours: -

N35 Grey - S



N45 Grey - MTO



Safety Yellow - S



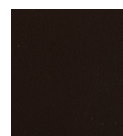
Green - S



White - MTO



Black -MTO



Red -MTO



Blue - MTO



Safety Blue -MTO



Stocked - S

Made to Order - MTO

Rapidcote is also available in: - Clear

PERFORMANCE DATA:

Minimum Application Temperature: Air	+5°C
Maximum Application Relative Humidity: Air	80%
In-service temperatures:	-20 to +80°C
Slip resistance:	Slip resistance variables available with added non-slip aggregates, (see later)
Chemical Resistance:	Resistant to chemical spillage –cured 7 days at 25°C. Refer: Chemical resistance literature.
VOC Emission: SPME-HS-GCMS	VOC = 176 g/L for Rapidcote - Colours VOC = 206 g/L for Rapidcote Clear

RECOMMENDED USES:

- Ablution areas
- Construction and Mining Industry
- Factory floors
- Hospitality
- Pharmaceutical | cosmetic | clean rooms
- Rapid curing line marking
- Residential garages and workshops
- Seamless, smooth, hygienic floors
- Slip resistant floor finishes
- Warehouse
- Bulk Retail
- Chemical and Oil Industry
- Food processing & Storage plants
- Healthcare
- Pulp and Paper mills
- Resin floor coving top coating
- Retail and display areas: Vehicle showrooms | studios
- Sewerage treatment plants
- Vehicle Workshops

NOT RECOMMENDED:

- Application below +5°C. This will impede the flow, application and curing.
- Application to green (uncured) concrete.
- Application to unsound substrates.
- Application to incorrectly prepared surfaces.

LIMITATIONS:

- Substrate must be abraded.
- Priming is required where moisture content of the substrate is above 75Rh.
- Priming is required when there are contaminants on the surface that are not able to be ground clean.
- Surfaces must be dry. Take care in humid conditions.
- Must have good, positive cross ventilation.
- Not for use over existing coatings without first checking the compatibility. Refer: *allnex Construction Products for advice.*
- It is the user's responsibility to ensure the application is correct.

HEALTH & SAFETY: Refer safety data sheets (SDS).

- Avoid skin contact.
- Avoid breathing vapour or fumes
- Provide adequate ventilation
- Wear safety equipment including clothing and breathing apparatus

SUBSTRATE:

All substrates shall be stable and solid.

Concrete: New

Shall have a surface which has been mechanically trowelled to AS3610:1995 U3/NZ/3114:1987U3 finish.

Concrete shall be cured for a minimum of 28 days prior to the installation of the Rapidcote.

Minimum Compressive Strength at 28 days cure: 25 MPa. (25 N/mm²)

The moisture content shall be less than: 75% RH.

Have a suitable vapour resistant membrane beneath the concrete.

Concrete: Old

Minimum Compressive Strength: 25 MPa. (25 N/mm²)

The moisture content shall be less than: 75% RH.

Have a suitable vapour resistant membrane beneath the concrete.

******Note******

If the substrate is an above grade slab and waterproofing is required to comply with NZBC E3, consult with allnex Construction Products.

Metal:

Metal must be sound.

Particular attention must be given to the preparation of bolts and securing fixtures and that any damaged items are replaced prior to the installation of the protective coating system.

Existing Coatings:

Rapidcote may not be compatible with some existing coatings or resin topping systems.

It is the user's responsibility to ensure compatibility by undertaking a test area. Refer: *allnex Construction Products for advice.*

QUALITY ASSURANCE:

The allnex Licensed Contractor shall ensure all QA checks have been undertaken prior to the installation process and subsequently during the installation process. The completed documentation must be made available to allnex and the client/clients authorised personnel. The product is to be installed within the required control range to ensure a fully cured hard wearing monolithic floor coating system.

Information to be recorded daily is:

- Concrete sub-base or prefill mix.
- Material batch numbers used.
- Sequence of mixing, ratios and quantities and formula.
- Substrate moisture content & Substrate temperature.
- Ambient temperature | Ambient relative humidity.
- Daily detail of licenced contractors on-site.

PRODUCT PROPERTIES:

Pot Life	+20°C ~50%RH	6 hours <i>The lid must be kept securely fastened (see Pot Life below)</i>
Touch Dry	+20°C ~50%RH	30 minutes
Hard Dry	+20°C ~50%RH	4 hours
Recoat time ~ Minimum ~ Maximum	+20°C ~50%RH	1 hours 48 hours
Full Cure	+20°C ~50%RH	24 hours
Thinning	Not recommended	
Clean Up	Solvent HA	
Dangerous Good Class ~ Rapidcote Resin ~ Rapidcote Hardener	Hazard Class 3 Hazard Class 3	Packing Group III Packing Group III
Packaging ~ Rapidcote Resin - Colour ~ Rapidcote Resin - Clear ~ Rapidcote Hardener	14.7 kg - 10 litres 9.8 kg - 10 litres 1 kg - 1 litre	
Shelf life	12 months from date of manufacture. (After this period consult with allnex)	

SURFACE PREPARATION:**Concrete:**

Prepare concrete by mechanical abrasion method to: - **CSP3**. (Concrete Surface Profile Scale - International Concrete Repair Institute)

See technical literature: - http://www.allnexconstruction.com/pdf/Floor_Preperation_Requirements.pdf

Remove all concrete curing agents, contaminants and any other material likely to affect the adhesion of the Rapidcote.

Do not apply over existing coating without checking compatibility (compatible with most 2 component coating systems). However; over coating is not likely to be successful without strong, coarse sanding or abrasion.

Prefill any large divots with allnex K125 or Epoxy Fairing Cream and diamond grind to remove any highpoints or contaminants.

Metal:

Remove all contaminants including, dirt, grease, oil, fats, by steam cleaning prior to the Blasting sequence

Blast with steel grit to obtain the following finish:

SA 2.5; Micron Finish 65 – 75

Particular attention must be given to the preparation of bolts and securing fixtures and that any damaged items are replaced prior to the installation of the protective coating system.

**** Note****

Metal does not require priming prior to the application of the Rapidcote providing the correct surface preparation is undertaken.

COVES:

Where required:

See technical literature – Details: - http://www.allnexconstruction.com/pdf/Details_resin-floor-toppings.pdf

Install Coves:

- Small Pencil Coves: Supaset | Supascreed
- Other Coves: Supascreed

Install allnex cove upper termination metal strips: **5.2mm or 9.2mm rebated strip.**

Use a rebated wall cut if the coving strip cannot be used.

Install fibreglass CSM cloth in floor/wall internal junctions. (Required on surfaces other than Concrete upstands)

STZ PREFILL: (for adding falls, slope modification and floor angles)

Where required:

STZ prefill system types: See STZ technical literature. http://www.allnexconstruction.com/pdf/stz_prefill.pdf

The falls must be specified pre-tender. (Rapidcote is medium build floor coating and prefill may involve significant extra materials). The quantities of materials required to raise the floor height at wall perimeters is often underestimated. To do this may involve significant extra costs and should be discussed and agreed. It is a very common for STZ prefill system to be used under Rapidcote to create falls to drains and other filling applications. Normally for new work falls are laid in the concrete and fall to drains. However, in refurbishment the drains and falls are incorrect. Sometimes new drains are installed. The Prefill create falls of at least 1: 50 to ensure no ponding water. (1:100 will fall but will have standing water in places).

PRIMING:**Concrete:**

Rapidcote will require a primer if the substrate is not below 75Rh or if contamination of the substrate is present that cannot be removed by diamond grinding.

- Use **Supascreed Primer** (Solvent Free) at 5-6m²/Lt. Apply evenly.
- Allow to **fully cure (12 -14 hours @ 14°C)** before application of the Rapidcote system.

Existing Resin Flooring and Coatings Systems:

- Prime with **Rapidcote Primer** following the correct surface preparation methods. (Refer; Rapidcote Primer Technical Literature)

Coves:

- Prime with **Rapidcote Primer** following the correct surface preparation methods.

RAPIDCOTE KIT COVERAGE & FILM BUILD:**Coloured Version**

Rapidcote Resin: Part A	14.7 kg - (10 litre)
Rapidcote Hardener: Part B	1.0 kg - (1 litre)
Mix Total – litres (kg)	15.7 kg kit - (11 litre)
Kit Coverage @9m ² / litre /coat ~ 2 x coats	49.5m ²
~ 3 x coats	33.0m ²
Theoretical Film Build - Minimum 125 microns	

RAPIDCOTE KIT COVERAGE & FILM BUILD:**Clear Version**

Rapidcote Resin: Part A	9.8 kg - (10 litre)
Rapidcote Hardener: Part B	1.0 kg - (1 litre)
Mix Total – litres (kg)	10.7 kg kit - (11 litre)
Kit Coverage @9m ² / litre /coat ~ 2 x coats	49.5m ²
~ 3 x coats	33.0m ²
Theoretical Film Build - Minimum 125 microns	

RAPIDCOTE MIXING:**Mix Ratio: By volume**

Resin	100 parts
Hardener	10 parts

MIXING METHOD:

Add complete contents of Rapidcote Resin (Part A) and Rapidcote Hardener (Part B) to a suitable container. Power mix at low speed (approximately 300rpm) for 2 minutes ensuring both compounds are homogeneously blended and the colour is uniform. Scrape the pail sides with a long broad-knife and then mix again. Mix slowly to avoid air entrapment.

******Note******

Ensure no unmixed materials remain on the sides, rims or lips of the container

APPLICATION METHOD:

Roller | Brush | Conventional Spray | Airless Spray

******Note******

If spraying, care must be taken in cleaning equipment and to avoid “setting” of the Rapidcote in equipment if left to stand.

Take care to ensure the specified application rates. – If material is applied in a thick film curing will be inhibited. Isolate access to prevent people and wind-blown dust and dirt affecting the finish.

Two Coat System:

Two coat systems are adequate on good, dense concrete. (Or steel)

Three Coat System:

Three coats are recommended if a non-slip media is required. The non-slip media is applied in the second coat.

CURE:

Rapidcote achieves a rapid cure when there is good ventilation and cross-flow air with no “still areas”. The Rapidcote relies on air movement to evaporate the diluent carrier. This loss then catalyses a rapid cure.

POT LIFE:

To achieve long pot life the lid must be kept on the material once mixed with the hardener, failure to do so will result in the curing of the material in the container.

SLIP RESISTANT FINISHES:

Typical co-efficient of friction “wet” NZS/AS3661.1:1993:

CF	Non-slip Media	Quantity m ²	Application
0.54	Microcells	1.38 grams	Mixed into kit - applied in second coat ~ 50 grams per 4 litres
0.56	Revtred	12 grams	Broadcast into second wet coat
0.63	J61 Sand	2 kg	Broadcast into second wet coat

JOINTS:

All concrete control and construction joints should be carried through the Rapidcote using allnex K130 Epoxy or PU40 sealant.

MAINTENANCE:**Repairs:**

- Chemically clean.
- Mechanically abrade surface.
- Repair any divots with allnex K125 or Fairing Cream.
- Apply Rapidcote as per “Installation instructions”.

CLEANING:**Smooth Surface:**

Conventional floor cleaning procedures are normally adequate to maintain clean and hygienic surface.

Non-slip Surface:

Mopping may **not** adequately remove dirt and grime from the surface profile of the Rapidcote. We therefore recommend the use of a soft bristled broom in conjunction with the cleaning solution.

****** Note******

Ensure all detergent materials, dirt etc. is thoroughly rinsed from the surface following cleaning.

FIXING OF PLANT AND MACHINERY:

Mechanical fixings into the floor must be resin fixed. This is to ensure that there is no water migration into the substrate. Conventional expanding plugs, screws or anchors are not an acceptable fixing method.

CHEMICAL RESISTANCE:

The following chart shows a representation of the chemical resistance of some of the colours available. Resistant to chemical spillage –cured 7 days at 25°C.

Good general chemical resistance. Clean spills promptly.

Note:

Variables which may under extreme conditions, influence the chemical or corrosion resistance are:

- Temperature of chemical concentration.
- Intermittent or continuous contact.
- Application in adverse conditions.
- Risks of evaporation from spillage causing concentration to rise adversely.

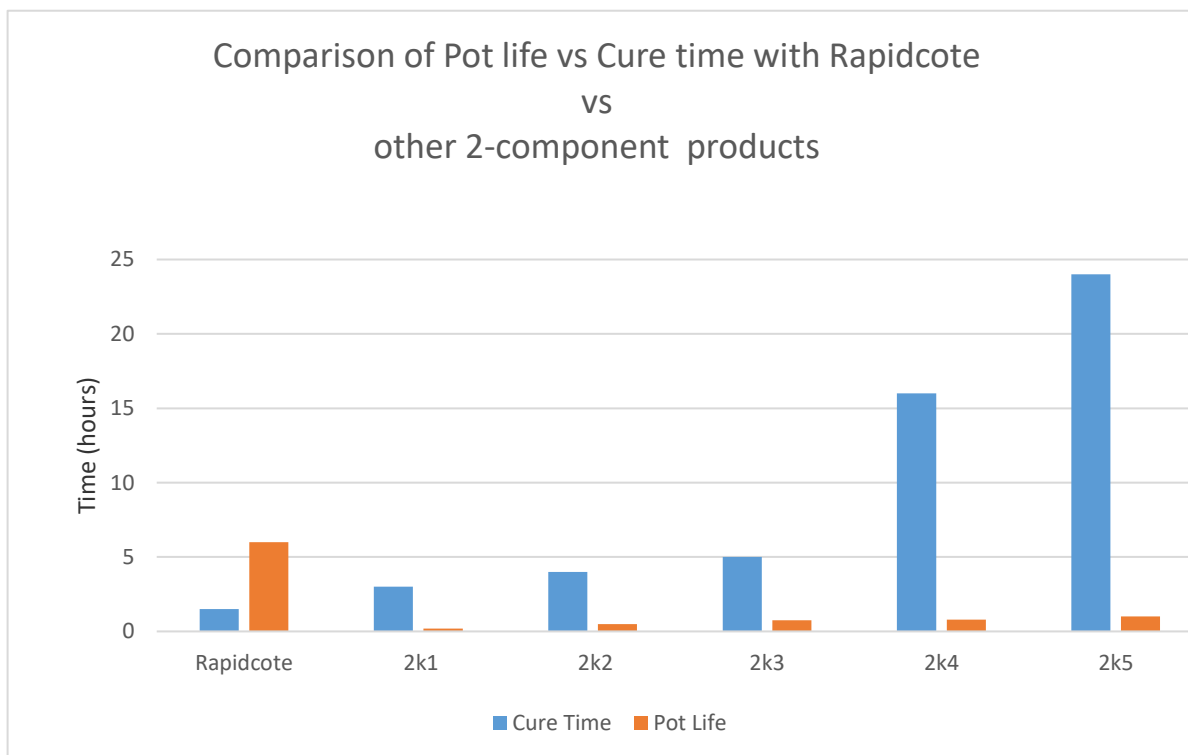
Test Media	Concentration	Rapidcote											
		1 Hour Spot				4 Hour Spot				7 Hour Spot			
		Clear	N35	Tan	Safety Yellow	Clear	N35	Tan	Safety Yellow	Clear	N35	Tan	Safety Yellow
ACIDS													
Hydrochloric Acid	10%	N	N	N	N	N	N	SM	N	N	N	SM	N
Sulphuric Acid	10%	N	N	N	N	N	N	N	N	N	SM	SM	N
Sulphuric Acid	25%	N	N	N	N	N	N	N	N	N	SM	SM	N
Acetic Acid	10%	N	N	N	N	N	N	N	N	N	N	N	N
Acetic Acid	50%	N	SM	N	N	N	SM	N	N	N	SM	N	N
Nitric Acid	10%	N	SM	N	N	N	MH	N	N	N	MH	N	N
Citric Acid	10%	N	N	N	N	N	N	N	N	N	N	N	N
Lactic Acid	90%	N	SM	SM	N	N	SM	SM	N	N	SM	SM	N
Phosphoric Acid	30%	N	N	N	N	N	SM	SM	N	N	SM	MH	N
ALKALIS													
Potassium Hydroxide	30%	N	N	N	N	N	N	N	N	N	N	SM	N
Caustic Soda	50%	N	N	N	N	N	N	N	N	N	N	N	N
SOLVENTS													
Toluene		N	N	N	N								
Acetone		D	REC	REC	REC								
Isopropanol		N	N	N	N								
Methanol		N	N	N	REC								
PETROCHEMICALS													
Kerosene		N	N	N	N	N	N	N	N	N	N	N	N
DISINFECTANTS & CLEANERS													
Dishwashing Liquid	100%	N	N	N	N	N	N	N	N	N	N	N	N
Bleach (2.5% Sod Hyd Cl)		N	N	N	N	N	N	N	N	N	N	N	N
MEKP – M50		REC	MH	MH	REC	REC	MH	MH	REC	REC	MH	SM	REC
SALT SOLUTION													
Brine	20%	N	N	N	N	N	N	N	N	N	N	N	N
OTHERS													
Sugar Syrup	30%	N	N	N	N	N	N	N	N	N	N	N	N
Distilled Water		N	N	N	N	N	N	N	N	N	N	N	N

LEGEND:

N	No mark / No Effect	SM	Slightly Marked
D	Damaged Blister	MH	Marked Heavily
REC	Recovered	EF	Evaluate Further

REC- Recovered (there was something there after removing the chemical, but it recovered quickly to undetectable)

Comparison of Pot life vs Cure time with Rapidcote VS other 2-component products



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