

REC POLYUREA 515

FAST SETTING, PURE POLYUREA ELASTOMERIC WATERPROOF MEMBRANE

DESCRIPTION

REC POLYUREA 515 is a spray-applied, 100% solids, flexible, two-component, rapid curing pure Polyurea system, designed as a waterproofing and protective coating. It combines the advantages of seamless coating with very long life cycles and high durability.

The system offers excellent surface properties and overall physical properties.

PRIMARY APPLICATIONS

Anti-corrosion, waterproof and protective membrane for concrete and steel in a wide range of environmental conditions.

Typical applications include:

- Below grade waterproofing
- Tank coating
- Waste water tank lining
- Marine environment
- Roof waterproofing
- Aquarium lining
- Landscape & water containment
- Waterparks
- Line striping
- Secondary containment
- Airports

KEY FEATURES

- Very low VOC
- Excellent chemical resistance, thermal stability and UV resistance (some discolouration may occur)
- Very fast turn-around time. The coated substrate can be put into service within an hour
- Excellent impact, abrasion and puncture resistance
- Seamless and monolithic, including field joints
- Significantly enhances the durability of reinforced concrete
- Low permeability values
- Suitable for use in potable water applications - complies to AS/NZS 4020-2005.

TECHNICAL INFORMATION

Typical physical properties @ 21°C unless stated otherwise

Property	Result
Solids by Volume	100%
VOC content (SCAQMD 304-91)	11.15g / litre
Viscosity A component @ 25°C	500-600 cPs
Viscosity B component @21°C	750 - 950 cPs
Density component A	1.12 kg/L
Density component B	1.04 kg/L

Tensile Strength (ASTM D412)	15 MPa
Tear strength (ASTM D624)	60 - 65 N/mm
Elongation @ 24°C (ASTM D412)	>350%
Shore D (ASTM D2240)	40
Abrasion resistance 1kg, H18 wheels (ASTM D4060)	95 mg / 1000 cycles
Water Vapor Transmission (E96-05 (B))	4.30g/m ² .24h
Water Absorption (AS 3558.1)	<1.0%
Cure time, walkable	2 minutes

PROCESSING PARAMETERS

Block temperature	60°C to 70°C
Hose Temperature	60°C to 70°C
Volume ratio	1:1
Pressure	2000 to 2500 psi
Gel time	5 to 10 seconds
Trafficable (light)	15 to 20 minutes
Post cure	24 hours

DIRECTIONS FOR USE

SURFACE PREPARATION

All surfaces should be clean, dry and free from contamination. The surface should be assessed and treated in accordance with ISO 8504.

CONCRETE

Dry abrasive blasting, wet abrasive blasting, vacuum-assisted abrasive blasting, and centrifugal shot blasting, as described in ASTM D4259, may be used to remove contaminants, laitance, and weak concrete, to expose blow holes, and to produce a sound concrete surface with adequate profile and surface porosity. All blow holes and minor surface imperfections shall be filled with recommended filler prior to application of Primer.

BARE STEEL

All welding seams must have a surface finish which ensures that the quality of the membrane system will be maintained in all respects. Holes in welding seams, undercuts, cracks, etc. should be avoided. If found, they must be remedied by welding and/or grinding. All weld spatters must be removed.

All sharp edges must be removed or rounded off in such a way that the specified film thickness can be build-up on all surfaces. The radius of the rounding should be minimum 2mm.

The steel must be of first class quality and should not have been allowed to rust more than corresponding to grade B of ISO 8501-1:2007. Any lamination must be removed.

Blast cleaning to Sa 2½. (ISO 8501-1:2007). Roughness: using abrasives suitable to achieve a coarse surface of Grade Medium G (50-85µm, Ry5) (ISO 8503-2).

PRIMING

After preparation, the substrate shall be primed with REC PU PRIMER.

Where compliance with AS4020:2005 is required, substrate is to be primed with REC PU PRIMER.

using REC PU PRIMER, for concrete, suggested application rate is 250 - 300ml per m²; For steel substrates, a rate of 150ml per m².

Broadcast of fire-dried sand is recommended for optimum adhesion properties.

The primer shall be allowed to become tack free prior to application of **REC POLYUREA 515**.

SPRAY EQUIPMENT

A high pressure spray proportioning machine/ spray gun for plural heated polyurea components.

A list of appropriate equipment is listed in the **REC POLYUREA 515** Application Guide.

APPLICATION

Product must be applied by specialist applicators experienced in the application of poly urea products.

Do not dilute **REC POLYUREA 515** or associated primers under any circumstances.

Normal recommended minimum applied thickness of **REC POLYUREA 515** is 1.5mm DFT for external waterproofing and 2.5mm to 3.0mm DFT for submerged conditions.

Use REC CLEANER for the flushing of equipment. If material has been stored for a period of time prior to use, thoroughly mix the Part B component with a drum mixer until a homogeneous mixture and color is obtained. Refer to the **REC POLYUREA 515** Application Guide for further detail.

COLOUR

It should be noted that **REC POLYUREA 515** is an aromatic poly urea; therefore, as with all aromatics, over a period of time color change will occur if exposed to UV rays. This will not have any negative effect on the physical properties of the product.

DISPOSAL CONSIDERATIONS

Cured **REC POLYUREA 515** and cured REC PU PRIMER can be disposed of without restriction. The uncured A and B components should be disposed of according to local environmental laws and ordinances. "Drip free" containers should be disposed of according to local environmental laws and ordinances.

CLEANING

REC POLYUREA 515 should be removed from tools and equipment with REC CLEANER immediately after use. Cured material can only be removed mechanically.

COVERAGE

REC POLYUREA 515 1.0 to 3.0 liters / m² depending on specification

* Note: 1.0 litre/m² coverage rate is the minimum and requires a highly experienced operator for even and effective coverage, with a cross-hatch spray pattern.

Normal minimum recommended coverage is 1.5 liters/m².

3.0 liters/m² rate is the maximum coverage rate for a single coat application.

PACKING

REC POLYUREA 515 is available in 20 kg and 200 kg packs.

STORAGE

REC POLYUREA 515 have a shelf life of 12 months from date of manufacture if stored at temperatures between 2°C and 35°C.

If these conditions are exceeded, Reckon Technical Department should be contacted for advice.

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