PIRASEAL 80S

TWO COMPONENT HYBRID POLYUREA ELASTOMERIC WATERPROOFING MEMBRANE

DESCRIPTION

Piraseal 80S is a two component, 100% solids, rapid curing, spray applied, hybrid polyurea, elastomeric waterproofing membrane. Piraseal 80S is comprised of a polyether polyol, amine chain extender and MDI based isocyanate.

Piraseal 80S rapidly cures to form a high performance seamless, tough, durable, elastomeric waterproofing membrane, with good crack bridging properties. Piraseal 80S has excellent adhesion to most suitably primed building substrates and is suitable for above and below ground applications.

FEATURES/BENEFITS

- Class III membrane in accordance AS 4654.1
- Rapid reactivity and curing time
- Almost immediate return to service
- Permanently flexible
- Good chemical resistance
- 100% solids
- Excellent durability and abrasion resistance
- Mercury free

TYPICAL APPLICATIONS

It is recommended for waterproofing areas such as podiums, roofs, retaining walls, planter boxes and water tanks.

PERFORMANCE DATA AND PHYSICAL PROPERTIES

Performance data and physical properties @22°C.

Isocyanate	
Appearance	Clear yellow liquid
Specific Gravity	1.13 +- 0.02 g/ml
Brookfield Viscosity (22°C)	500 +- 100 mPa.s
Brookfield Viscosity (65°C)	120 +- 30 mPa.s
Gel Time	12 +- 2 seconds
Cure Time	10 +- 5 minutes

Polyol	
Appearance	Clear pale straw liquid
Specific Gravity	1.04 +- 0.02 g/ml
Brookfield Viscosity (22°C)	600 +- 200 mPa.s
Brookfield Viscosity (65°C)	75 +- 30 mPa.s

Test	Method	Specification
Hardness (Shore A)	ASTM D1737	80 +- 5
Solid Density	N/A	1.10g/ml
Tensile Strength	ASTM D412	15+- 5 N/mm2
Elongation	ASTM D412	>300%
Tear Strength	ASTM D624 (Die C)	50N/mm
Taber Abrasion	ASTM D4060	220mg loss
Water Absorption	ASTM D471	<1% @ 24hrs

SUBSTRATES

Piraseal 80S is suitable for concrete, render, screeds, masonry block, steel and PAA certified exterior grade plywood.

PREPARATION

All surfaces to be waterproofed must be firm, clean, dry, sound and smooth. All laitance, grease, oil, wax, curing compounds, loose material, paint and any other contaminants which may reduce or prevent adhesion must be mechanically removed. Grinding may be required to achieve and open, textured surface.

Masonry surfaces must be pointed flush and surface defects repaired. Repairs must be carried out using and appropriate concrete repair mortar.

New concrete must be cured for minimum 28 days. Render and cement screeds must be cured for minimum 7 days. Damp concrete render or screeds must be allowed to thoroughly dry.

The substrate temperature should be a minimum of 10°C to achieve good adhesion. For substrate temperatures below this, consult Piraetec Technical Department.

STATIC CRACK TREATMENT

For cracks greater than 2mm, clean cracks thoroughly before filling with Piraseal Flex sealant.

Piraseal 80S cannot span gaps. For dynamic cracks/expansion joints and control joints, the use of Piraseal Elastoband or Piraseal Butyl Tape system is recommended. Contact the Piraetec Technical Department for further advice.

PRIMING

Dry porous substrates must be primed with Piraseal Primer 80S or Piracoat WBE-S.

Metal surfaces must be prepared by blast cleaning and primed with an appropriate metal etch primer. Contact the Piraetec Technical Department if there is any doubt about the suitability of substrates.

COMPONENT PREPARATION

POLYOL should be mixed each day prior to use as the components can separate out overnight. It should also be mixed after extended breaks, such as lunch breaks. Please do not over mix as the aeration will reduce the physical properties of the resultant elastomer.

ISOCYANATE does not need to be mixed prior to use.

It is recommended that both components are preconditioned to 22-25°C to ensure that the system has consistent reactivity and performance. The drums must be above 10°C before spraying.

APPLICATION

Piraseal 80S must be applied in accordance with the applicable provisions of the National Construction Code.

Installation of a fillet is required at all horizontal and vertical transitions. Install the fillets using Piraseal Flex sealant.

Prior to application, confirm substrate temperature and moisture content, relative humidity and dew point.

Piraseal 80S can be applied in temperature of up to 35°C.

BEWARE OF CONDENSATION!

The substrate temperature must be at least 3°C above dew point to reduce the risk of de-lamination due to condensation.

Apply Piraseal 80S using a plural component, heated, proportioning spray equipment as those manufactured by Graco®, Wiwa®, Gama, Isotherm, Reaku or any other suitable equipment producer.

The proportioning equipment utilised must be capable of supplying correct pressure and heat for the appropriate hose length on a consistent basis.

MACHINE SETTINGS

Mixing: 1:1 by volume.

Dynamic Spray Pressure: > 2000 psi.

(Note: this is Gun type / setup / output dependent)

Primary Heater Temperatures: 65°C.

(set both Component temperatures the same) Hose Temperature: as per Primary Heater setting.

Apply Piraseal 80S so that a minimum dry film thickness of 1.5mm (1500 microns) is achieved.

Piraseal 80S should not be applied in windy conditions due to potential application losses, possible contamination of surrounding areas / surfaces from wind-borne spray and the lack of application control resulting in variable applied thickness and surface evenness / irregularities.

LIMITATIONS

Do not apply Piraseal 80S:

- Over damp, wet or contaminated substrates;
- If it is raining or if rain is imminent;
- Directly over any existing coatings;
- As an exposed membrane. Piracoat SA-TC must be applied as a top coat;
- In water tanks containing potable water. Use Piraseal 80S PW;
- To areas subject to negative hydrostatic pressure or rising damp.

COVERAGE

1.65 kg (1.5 litre) of Piraseal 80S will cover approximately 1M2 at 1.5 mm coating thickness. Allow for processing losses, over-spray, etc.

PACKAGING

Piraseal 80S is supplied in 42kg or 420kg kits.

CLEAN-UP

Reusable tools should be cleaned carefully with Xylene Solvent.

SHELF LIFE

POLYOL should be stored in closed containers under dry conditions out of direct sunlight between 18 and 25°C.

ISOCYANATE should be stored separately from the polyol component, but under the same conditions.

Both products will have a minimum shelf life of six months when stored under these conditions.

SAFETY

Please refer to Material Safety Data Sheet (MSDS) for personal protection, proper handling, storage, first aid and spills.

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PIRAETEC
CONSTRUCTION PRODUCTS