

# INNOVSEAL - PP 400

## TECHNICAL DATA SHEET



إنوشيم انترناشونال ش.ذ.م.م

InnoChem International L.L.C.

Waterproofing & Insulation Materials

### PRODUCT DESCRIPTION

INNOVSEAL -PP 400 represents the latest in pure hot spray coating technology , offering rapid curing , superior abrasion resistance, and a seamless finish suitable for a wide range of applications . This 100 % solids , volatile -free polyurea coating is applied using a 1:1 mix ratio with plural -component spray equipment . Specially designed for waterproofing , INNOVSEAL -PP 400 maintains excellent durability in challenging conditions . The Innochem -formulated system provides a broad application window and remains unaffected by high humidity or low temperatures in the field . It can be applied in a single layer , achieving thicknesses between 1 and 5 mm.

### PRODUCT DEFINITION

**Polyol Component(B)** : Pure Polyurea Polyol

**Isocyanate-Component(A)** : Low function prepolymer.

### STORAGE & HANDLING

Containers of pure polyurea system should be kept properly stored indoors in a well-ventilated area under normally factory conditions, at temperatures of 20~25°C.

More detailed information can be obtained from MSDS.

### RISKS AVAILABLE

The isocyanate component irritates the respiration sytem, eyes and skin. This can have allergic reactions if inhaled or when comes in contact with skin. The required measurements indicated in the safety data sheet should be noted during handling of isocyanate. The same procedure should also be applied during handling of the B system (polyol) considering the risk available.

Refer to the Innochem material safety data sheet for this product.

### COMPONENT DATA

	Unit	Polyol Component	Isocyanate Component	Standard Method
Viscosity (25°C)	mPa.s	450	800	—
Specific gravity (25°C)	g/ml	1.02	1.11	—
Storage Stability	month	6	6	—

### LABORATORY TEST DATA

	Unit	Value	Method
A:B Ratio	Based on volume	100:100	—
Gel time	s	7-10	—
Tack free time	s	12-17	—



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### MATERIALS APPLICATION:

Two component pure polyurea waterproofing membrane applied using plural-component spray equipment.

### MACHINE CONDITION:

Mixing Ratio of Components:	1:1 (volume)	
Component Temperatures:	70 – 75 °C	Depends on weather condition
Component Pressure:	160 – 180 Bar	

### ENVIRONMENTAL CONDITIONS

Substrate & ambient temperatures	5° C-35° C	
Substrate Moisture contend	≤4 %	
Relative Humidity	≤85 %	

### APPLICATION PHYSICAL PROPERTIES:

Below values were tested on samples produced under controlled conditions. Values will vary with differences in applications (i.e. Ambient conditions, process equipment and settings, material throughput, etc., Therefore, below values should be used as guidelines for purpose of evaluation.

Physical property	Standard	Unit	Value
Shore A Hardness	ASTM D 2240	--	A/94/I
Tensile Strength	ASTM D 412	N/mm <sup>2</sup>	14
Elongation	ASTM D 412	%	≥ 300
Tear Strength	ASTM D 624	kN/m	65
Abrasion	ASTM D 4060	Mg loss	125
Full cured	@ 23° C	days	2-3
Colour	--	--	Grey



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## APPLICATION METHOD:

### Substrate preparations – General recommendations:

The spray systems should only be applied to clean, dry and sound surfaces. Remove all dust, oil, grease and loose rust or any other foreign material to ensure adequate adhesion.

### Concrete:

The concrete shall be completely cured (or minimal 28 days). Laitance, release agents and salts need to be removed by high pressure water jetting or sandblasting.

Concrete must have a minimum pull off strength of 1.5 N/mm<sup>2</sup>

A primer is generally needed to achieve an adequate adhesion. Please respect the recoat window recommendation from your supplier.

### Metal/steel:

The metal surface needs to be prepared by means of sand blasting to near white. The surface profile will ensure adequate mechanical adhesion. Solvent cleaning is needed to remove the oil and grease. If priming is needed, this should be done within 8 hours after the sandblasting to prevent any flash rusting.

The surface must be assessed and treated in accordance with ISO 8504 and ISO 8501-1:2007

### Top Coats:

The system is not UV resistance. Therefore, a proper top coat is needed for exposed application.

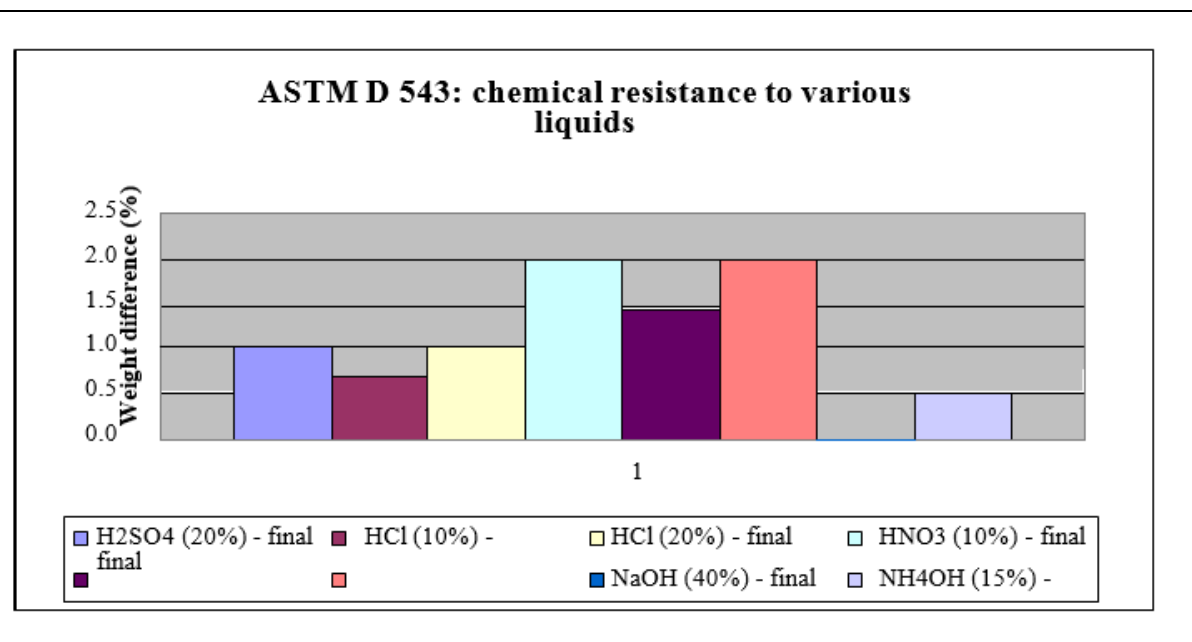
### Coverage:

2.0-2.5 Kg/m<sup>2</sup> for a thickness of approx. 2.0-2.5 mm

## ASTM D 543: 7 days chemical resistance test by immersion.

In this test method, die cut tensile god bones specimen are immersed into various liquids.

After an exposure time of 7 days, the weight difference is recorded. This type of test can be classified as the worst case scenario sine the free films have an exposed area of 250 mm at the perimeter of the die cut specimen.



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### General chemical resistance data:

#### ASTM D 3912:

#### Chemical resistance of Coating Used in Light-Water Nuclear Power Plants

This test method describes the immersion method of exposure for a coating system to chemicals. In this testing procedure, a black pigmented aromatic polyurea spray elastomer system was used. This system was spray applied to 2 mil blast profile steel panels, giving total encapsulation. These coated panels were then immersed half way into individual chemicals for a period of 1 year at 25°C, except were noted. The panels were then removed and inspected.

#### Chemical Resistance ASTM D 3912

Methanol	D	Sulfuric Acid/5 %	A
Gasoline	C	Sulfuric Acid/10 %	A
Diesel fuel	A	Hydrochloric Acid/5 %	A
Toluene	E	Hydrochloric Acid/10 %	A
MTBE	B	Phosphoric Acid/10 %	A
5% MTBE/Gasoline	B	Ammonium Hydroxide/10 %	A
Motor Oil	C	Ammonium Hydroxide/20 %	A
Hydraulic Fluid	A	Sodium Hydroxide/10 %	A
2-Methylbutane	A	Sodium Hydroxide/ 20 %	A
Water/Room temperature	A	Sodium Hydroxide/50 %	C
Water/82°C, 14 days	A	Sodium Hydroxide/1%,50°C, 14 days	C
10% NaCL/Water/Room temp	A	Potassium Hydroxide/10 %	A
10% NaCL/Water/50°C, 14 days	A	Potassium Hydroxide/20%	C
10 % Sugar/water	A	Acetic Acid/10%	A

A	No visible damage
B	Slight surface change
C	Slight surface discolor, no hardness loss
D	Swelling, <48 hrs
E	Swelling, <24 hrs