

# High Performance Powder Coating

PermaStore has joined forces with AkzoNobel who is a leading global producer of paints and coatings. The result is an innovative, technologically advanced Fusion Bonded Epoxy product, FUSION<sup>®</sup> V1100, for modular, bolted containment systems. The high-tech RESICOAT<sup>®</sup> R4-ES used on the internal surface combined with the ultra durable INTERPON<sup>®</sup> D2525 on the external surface sets the new benchmark within its sector.

Following extensive research, with shared know-how and combined with our considerable experience in Glass-Fused-to-Steel coating technology, we have developed FUSION<sup>®</sup> V1100 to be an exceptional Fusion Bonded Epoxy coating system, second only in performance to PERMASTORE<sup>®</sup> Glass-Fused-to-Steel.

PermaStore use high quality grades of sheet steel which meet or exceed the requirements of relevant tank design standards and applicable International Standards e.g. AWWA D103-09, EN 10025, EN 10149 and ASTM A1011.

## The Coating Performance

FUSION<sup>®</sup> V1100 is the superior, optimum Fusion Bonded Epoxy coating for your containment solution and provides the following features:

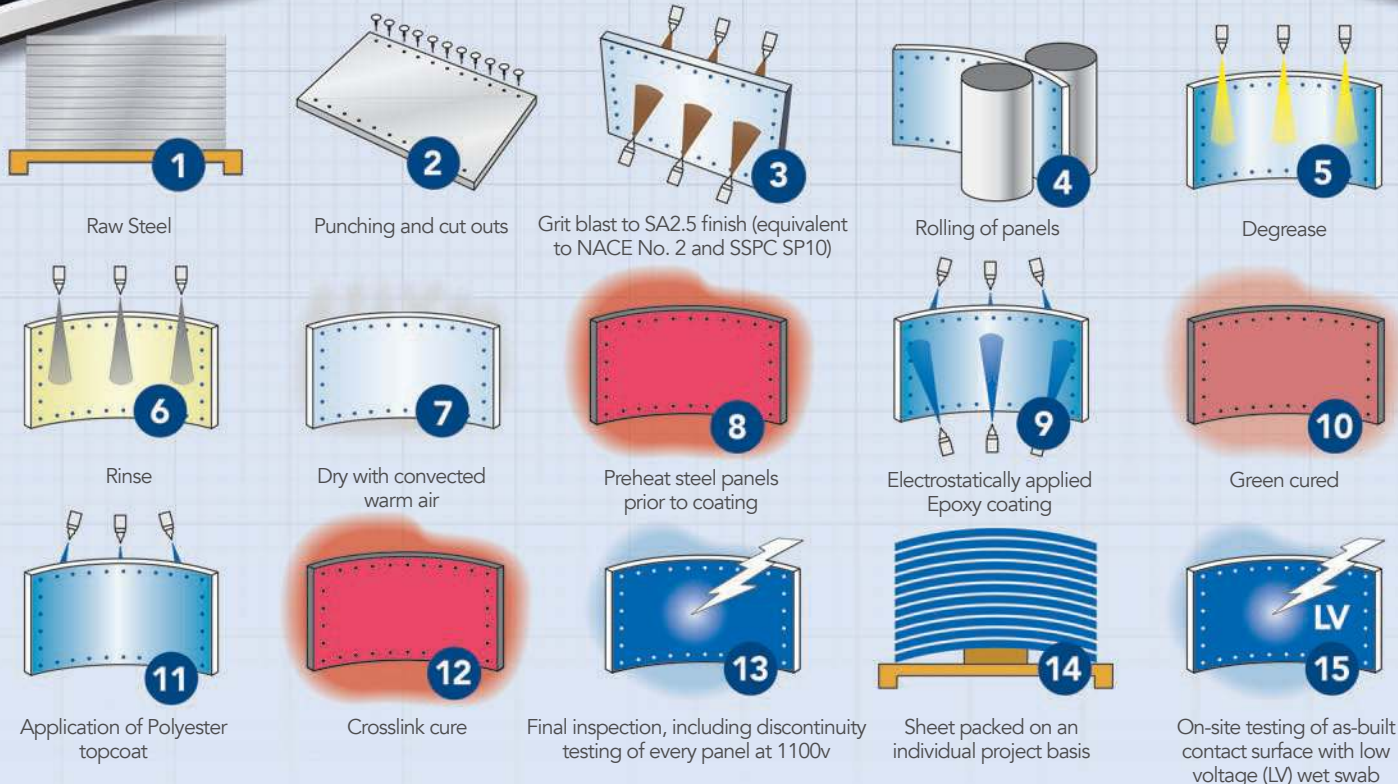
### Internal Coating – RESICOAT<sup>®</sup> R4-ES

- ▶▶▶ One of the most durable epoxy coatings when compared to other available epoxy products in the market place.
- ▶▶▶ High Voltage Testing carried out on every sheet with zero discontinuities (defect free at test voltage).
- ▶▶▶ The coating holds approval for drinking water regulations such as NSF/ANSI 61 and BS 6920 as well as other regulations in numerous other countries.
- ▶▶▶ Optimum control of the external coating overspray keeps the internal coating compliant with drinking water regulations.
- ▶▶▶ Coating undergoes and has to pass many different types of tests in order to ensure high performance and compliance with our publicly available Quality Standard.
- ▶▶▶ An electrostatically factory-applied powder coating is applied to the internal surface which provides a high quality and consistent uniform finish.
- ▶▶▶ The formulation complies with appropriate controls on substances, including European REACH Regulations, which allows the coating to attain the highest global credentials for safety and environmental performance.

### External Coating – INTERPON<sup>®</sup> D2525

- ▶▶▶ A combination of an epoxy primer and an ultra durable polyester top coat.
- ▶▶▶ A universal testing procedure known as Florida outdoor exposure testing is used to test the external polyester surface ensuring UV resistance as well as colour and gloss durability and consistency in the most intense sunlight conditions. Florida is the internationally recognised and realistic benchmark location for outdoor exposure testing due to its subtropical weathering exposure.
- ▶▶▶ Coating has passed rigorous testing and holds a number of independent approvals. In accordance with ISO 2810, the coating exceeds Qualicoat Class 2 requirements after 3 years Florida outdoor exposure testing and meets AAMA 2604-5 requirements after 5 years Florida outdoor exposure testing.
- ▶▶▶ Coating undergoes and has to pass many different types of tests in order to ensure high performance and compliance with our publicly available Quality Standard.
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## The Process



### Internal Coating - RESICOAT® R4-ES

Application	Test	RESICOAT® R4-ES
Dry Film Thickness	Non-Destructive Test	6 - 10 mils / 150-250 microns
Hot water immersion 90 days, 70°C	AWWA C550-05	Pass
Adhesion after 7 days, 90°C water	ISO 4624	≥16MPa
Corrosion Resistance	Salt Spray ISO 9227 / ASTM B117	Meets or exceeds industry norms
Impact Resistance	ASTM G14 3.2mm (1/8 in) steel plate	> 18 Joule
pH range	-	3 - 13*
Abrasion Resistance	Abrasion wheel ASTM 4060	CS-17, 1000g, 1000 cycles <40mg
Hardness	ISO 15184 / ASTM D3363	2H
Chemical Immersion	50% NaOH, 50% H <sub>2</sub> SO <sub>4</sub>	2 years no change
Holiday test	1100v every panel	Discontinuity free (zero defects at test voltage)

### External Coating - INTERPON® D2525

Application	Test	INTERPON® D2525
Dry Film Thickness	Non-Destructive Test	6 - 9 mils / 150 - 230 microns (combination of an epoxy primer and polyester topcoat)
UV measure	Florida outdoor exposure testing	5 years
Colour Stability	Florida outdoor exposure testing	5 years
Impact Resistance	ISO 6272	Pass Qualicoat Class 2 Requirements

\*Note: All applications are subject to concentration and temperature considerations.

Note: The epoxy specification is offered as a cost effective solution to be considered by the process designer for specific applications. In circumstances where commercial factors or ongoing process requirements dictate that future access for inspection and maintenance will be impractical, the process designer should consult with the end user and consider whether cathodic protection should be specified.

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