

Resicoat R4-ES Fusion Bonded Epoxy

Product Data Sheet

Product Description:	<p>Resicoat R4-ES is a functional fusion bonded epoxy powder coating designed for use on valves and fittings in contact with potable water. Resicoat R4-ES typically offers full corrosion protection of valves and fittings with excellent adhesion, excellent resistance to cathodic disbondment, good flexibility, good chemical stability and excellent heat resistance. The fast cure properties of Resicoat R4-ES make it suitable for applications where consistent film thickness is required.</p> <p>The Resicoat R4-ES series meets the performance requirements of AS/NZS 4158:2003 and complies with the water quality requirements of AS/NZS 4020:2005.</p>		
Powder properties*:	Chemical type	Epoxy	
	Particle size	Suitable for electrostatic spray or fluid bed	
	Specific Gravity	1.3 +/- 0.1	
	Moisture	0.7% max	
	Stability	6 months at 25°C	
	Gel Time	20 ± 7 seconds at 200°C	
	Film Thickness	>300 µm external, >350 µm internal	
	Stoving Schedule (For Valves and Fittings)	Spray - 10 minutes at 180°C (metal temperature) or equivalent Dip – preheat to (metal temperature) ≥ 195°C, no post cure required if > 6mm wall thickness	
Film Properties*:	Impact Resistance	AS/NZS 4158 Section 2.3.5	> 2.0J
	Flexibility	AS 3862	No cracking @ 0°C and 1% strain
	Cathodic Disbondment	AS 3862 Appendix M 28 day at 23°C	28 day r < 15mm
	Hot Water Immersion	AS 3862 14 days at 50°C	Rating < 1
	Water Absorption	AS 3862 100 days at 23°C	< 4%
	Abrasion Resistance	ASTM D4060 CS17, 1000g, 1000 cycles	< 40mg loss
	Thermal Stability	AS 3862 100 days at 100°C	No cracking at 1.0% strain
	Ultraviolet Radiation	ASTM D2565 Type B 100 days	No cracking at 1.0% strain
Effect on Water Quality*:	Taste of Water	AS/NZS 4020 Part 1 AS/NZS 4020 Part 2	Complies*
	Appearance of Water Extract	AS/NZS 4020 Part 1 AS/NZS 4020 Part 2	Complies*
	Growth of Aquatic Micro-Organisms	AS/NZS 4020 Part 1 AS/NZS 4020 Part 2	Complies*
	Cytotoxic Activity of Water Extract	AS/NZS 4020 Part 1 AS/NZS 4020 Part 2	Complies*
	Mutagenic Activity of Water Extract	AS/NZS 4020 Part 1 AS/NZS 4020 Part 2	Complies*
	Extraction of Metals	AS/NZS 4020 Part 1 AS/NZS 4020 Part 2	Complies*

* **Resicoat R4-ES** satisfies the criteria of AS/NZS 4020:2005 Products for use in contact

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- Pretreatment:**
- Remove any oil, grease, dust or graphite with suitable solvent, and any salt deposits with fresh water.
- (Cast Iron)**
- Grit blast to SA 2 ½ with a surface profile of 50-80 microns, cleaning blasted surface by air blast, brushing or suction. Use gloves to avoid hand contact.
 - Grind out any defects and reblast if necessary. Ensure < 4 hours from blast to coat.

Application: Preheat using furnace or induction heating as per above curing recommendations. Apply powder electrostatically or via fluidised bed application and test a sample of each product batch to AS/NZS 4158:2003 *Section 3 Requirements for Factory-applied Coating* for quality control purposes. Repair using Interseal 670HS repair coating if required.

Performance: Akzo Nobel's liability is strictly limited to replacing such quantity of powder coating as proved to be defective. Before using the powder coating the user shall determine its suitability for his intended use and the user assumes all risk and liability.

Safety Precautions: This product is intended for use only by professional applicators in industrial environments and should not be used without reference to the relevant health and safety data sheet which Akzo Nobel has provided to its customer. If for any reason a copy of the relevant health and safety data sheet is not immediately available the user should contact Akzo Nobel to obtain a copy before using the product. Minimum safety precautions in dealing with all powder coatings are as follows. All dusts are respiratory irritants. Therefore, inhalation of the dust or of the vapours resulting from the cure should be avoided. Take steps to prevent skin contact, but should contact occur, wash skin with soap and water. In case of eye contact flush immediately with clean water and seek medical advice. Dust clouds of any finely divided organic material can be ignited with an electric spark or open flame. Dust and powder should not be allowed to build up on surfaces or ledges. Dust collection equipment should be used which has provision for adequate explosion release. All equipment should be electrically earthed to prevent build up of static. Users are recommended to follow the guidelines laid down in the AS3754:1990, Safe Application of Powder Coatings by Electrostatic Spraying.

Disclaimer: Unless otherwise agreed by us in writing, any contract to purchase products referred to in this brochure and any advice which we give in connection with the supply of products are subject to our standard conditions of sale. The information contained in this data sheet is liable to modification from time to time in the light of experience and our policy of continuous product development.

* Typical minimum specifications. Performance may vary slightly between individual products.

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