



Functional Powder Coatings

Resicoat® R-726

FBE – External Pipe Coatings

Code: HLF04R

Product Description

Resicoat® R-726 is a Fusion Bonded Epoxy Single Layer corrosion protection technology for standard service temperature. It has excellent flexibility characteristics even at -50° C (-58° F) and exhibits low water absorption. The recommended coating thickness is in the range of 300 – 700 µm (12 – 28 mils). Resicoat® R-726 can also be used as a primer in a multi layer system.

		Typical value	Method
Powder Properties	Gel time at 200° C (392° F) at 205° C (401° F)	25 – 35 sec.	modified ISO 8130-6
		12 – 18 sec.	CSA hot plate
	Density	1.58 ± 0.05 g/cm ³	Air comparison pycnometer
	Particle size distribution	< 32 µm = 30 – 50 %	Sympatec laser
		< 160 µm = 99 – 100 %	ISO 8130-1
	Theoretical coverage	25 m ² per 1 kg at 25 µm (122 square feet per pound at 1 mil) at 100 % application efficiency	
	Color	gray	
Storage stability	12 months from delivery date at ≤ 23° C (74° F) and 65 % relative humidity. Cooler temperatures and lower humidity are recommended. Shorter shelf life stability at higher temperatures. Do not exceed 33° C (91° F).		
Application Data	Substrate	Mild steel	
	Surface preparation	Near-White Blast as defined by SSPC SP 10, Nace No. 2, Swedish Sa 2½ or BS Second Quality	
Single Layer	Required surface roughness	50 – 100 µm (2 – 4 mils)	
	Recommended film thickness	300 – 700 µm (12 – 28 mils)	
	Application method	Electrostatic powder spray using a negative charge of 40 – 120 kV	
	Application temperature	220 – 235° C (428 – 455° F)	
Three Layer PE	Minimum time before quench	225° C (437° F): 90 sec.	
		235° C (455° F): 60 sec.	
	Recommended film thickness	100 – 300 µm (4 – 12 mils) – preferred 250 µm (10 mils)	
	Application method	Electrostatic powder spray using a negative charge of 40 – 120 kV	
	Application temperature	190 – 220° C (375 - 428° F)	
Glass transition temperature	58 ± 5° C (Tg1)		
	105 ± 3° C (Tg2)		inflection point
	30 – 70 J/g (Delta H)		



	Typical value	Method
Physical Tests	Performance will be influenced by quality of surface preparation, film formation and curing conditions. The following test results are typical for Resicoat® R-726 applied to 300 – 700 µm (12 – 28 mils) on steel panels cleaned to Near-White Blast (without pre-treatment):	
Gloss 60° angle	85 – 100 units	DIN 67530
Flexibility (12 – 16 mils)	5° pass at 25° C (77° F) 3° pass at 0° C (32° F) 3° pass at -30° C (-22° F) 3° pass at -50° C (-58° F)	CSA Z245.20-06 12.11 CSA Z245.20-06 12.11 CSA Z245.20-06 12.11
Impact resistance (12 – 16 mils)	2.5 J at -30° C (-22° F) 18.0 J at 25° C (77° F) 9.0 J at 25° C (77° F)	CSA Z245.20-06 12.12 ASTM G 14 (1/8"x5"x8" steel panels) ASTM G 14 (2.375" pipe)
Dielectric strength	≥ 30 kV/mm	DIN 30677-2
Adhesion (lab shear)	> 20 MPa	modified ASTM D 1002
Adhesion	> 20 MPa	ASTM D 4541
Adhesion in distilled water	rating 1 at 75 ± 3° C, 24 h no disbonding	CSA Z245.20-06 12.14 4 weeks, 90° C
Tensile strength	approx. 500 kg/cm ² (7000 psi)	ASTM D 2370-82
Elongation	approx. 3 %	ASTM D 2370-82
Hardness	> 85 90 – 110 F	Shore D, ASTM 2240 Buchholz, DIN 53153 Pencil
Abrasion (Taber)	80 mg 350 – 450 mg	ASTM D 4060 1000 g load 1000 cycles, CS 17 wheels 5000 cycles, CS 17 wheels
Cathodic disbonding	1 – 3 mm 4 – 7 mm 8 – 12 mm 1 – 3.5 mm	CSA Z245.20-06 12.8 -3.5 VDC, 65° C (149° F), 24 h -1.5 VDC, 20° C (68° F), 28 d -1.5 VDC, 65° C (149° F), 28 d TES-COAT-FBE, TC1A -1.5 VDC, 65° C (149° F), 48 h
Cross-section porosity	rating 2	CSA Z245.20-06 12.10
Interface porosity	rating 2 – 3	CSA Z245.20-06 12.10
Water immersion	no blistering or other failure no blistering or other failure	ASTM D 870-54 distilled water 38° C (100° F), 3000 h Tap water, 90° C (194° F), 4 weeks
Water absorption	< 2.5 % < 15% 3 % 4.5 %	60° C (140° F), 28 days 80° C (176° F), 28 days 60° C (140° F), 40 days 80° C (176° F), 40 days

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Disclaimer: This Product Data Sheet is based on the present state of our knowledge and on current laws. The data referring to Powder Properties, Application Data and Physical Tests is based on lab based samples. Factors such as quality or condition of the substrate may have an effect on the use and application of the product. It remains the responsibility of the user to test thoroughly if the product is applicable for the intended use. The use of the product beyond our recommendation releases us from our responsibility, unless we have recommended the specific use in writing. It is always the responsibility of the user to take all necessary steps to fulfil the demands set out in the local rules and legislation. We are not liable for any application-technological advice. The Product Data Sheet shall be updated from time to time. Please ensure you have the latest version before using the product. All products and Product Data Sheets are subject to our standard terms and conditions of sale (GCS). You can receive the latest copy of GCS via internet or our post address. Brand names mentioned in this Product Data Sheet are trademarks of or are licensed to the AkzoNobel group.