

Product Datasheet

Resicoat® R4-FB for Coating of Bus bars by Fluidized Bed Application Code: HNC01R

Product Description	Resicoat® R4-FB HNC01R is a one part, 100 % solids, epoxy powder coating for insulation of wire and busbars. Designed for fluidized bed application it has very good resistance against heat, chemicals, moisture and temperature. Resicoat® R4-FB HNC01R has a high level of flexibility and consistent edge coverage.		
Powder Properties		Typical value	Method
	Binder System	Epoxy	
	Density	1.30 – 1.40 g/cm ³	ISO 8130-2
	Gel time at 200° C	30 – 45 sec.	modified ISO 8130-6
	Particle size distribution	< 63 µm = 30 – 50 % < 200 µm > 99 %	Malvern ISO 8130-1
	Storage stability	6 months from date of manufacture at ≤ 23° C	
Application Data	Preheating temperature object	190 – 235° C object temperature	
	Post cure conditions object	The coating is self curing, if the wall thickness of the steel/cast iron is greater than 8 mm. If the wall thickness of the steel/cast iron is less than 8 mm, additional curing of 3 to 8 minutes at 190° C object temperature is required.	
Material Properties	Color	black	
	Recommended film thickness	250 – 350 µm	
	Flow	smooth	
	Gloss at 60° angle	70 – 90 units	ISO 2813
	Cross cut	Gt 0	DIN EN ISO 2409
	Impact resistance	> 5 Joule	DIN 3476-1
	Abrasion resistance	< 40 mg	ASTM D 4060 CS-17, 1000 g, 1000 cycles
	Elongation	> 5 %	DIN 3476-1
	Indentation resistance	48 h, 70° C 24 h, 60° C	< 30 % < 10 % DIN 3476-1/DIN EN 14901
	Compressive strength	> 100 MPa	ASTM D 695
	Shear adhesion	> 35 MPa	ASTM D 1002
	Heat aging		DIN EN 14901
	in air (110° C, 90 days)	fulfilled	
	in water (70° C, 7 days)	fulfilled	
	Thermal stability under heat aging	pass	AS/NZS 4158:2003
	Weathering (Xenong test), 100 days	pass	ASTM D 2596
	Hardness (Buchholz)	≥ 80	DIN EN ISO 2815
	Strain polarization	pass	WIS-4-52-01
	Adhesion after 7 days, 90° water	≥ 16 MPa	ISO 4624, GSK

		Typical value	Method	
Material Properties (continued)	Water condensation test (Cleveland test), 21 days	no change	ASTM D 4585	
	Salt spray test, 4000 h	no under-rusting on the cut	DIN EN ISO 9227 (steel substrate) EN 598	
	Chemical resistance (pH 3 – 13, 23° C)	fulfilled		
Typical Electrical Properties	Specific surface resistivity	> 10 ¹³ Ω	IEC 60093	
	Dielectric strength	> 30 kV/mmm	IEC 60243-1	
	Dissipation factor tan δ	25° C	< 0.01	ASTM D 150
		105° C	< 0.01	ASTM D 150
	Dielectric constant (100 Hz – 1 MHz)	4.0	ASTM D 149	
	Temperature index	130° C	IEC 60216	
Date of issue:	July 16, 2019			
Authorized by:	GK			
Revision no.:	1			

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.