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VHT Silicone Aluminium

890-2S100P-1991

Product Description	A textured aluminium-coloured powder coating specially designed to withstand the high temperatures in various industrial applications associated with flues, heat exchangers and exhaust mufflers.		
Powder Properties	Chemistry	Thermosetting powder coatings based on an epoxy - organosilicone binder system.	
	Application	Corona electrostatic spray or Tribo.	
	Coating Thickness (DFT)	General recommendation is 25-35 microns (µm), with a maximum thickness of 40 µm.	
	Gloss (visual)	Matt	
	Specific Gravity	1.30 g/cm^3	
	Coverage	Up to 19 m^2/kg at 40 microns film thickness.	
	Storage & Shelf Life	When stored in a cool (<20^{o}C), dry environment: 12 months.	
	Curing Schedule	See box label for curing conditions. Typical object temperature conditions are: • 10 minutes at 200 Celsius Full cure will only be achieved after pyrolysis, typically when the coating is in use. The curing schedule above will allow handling without loss of adhesion, etc.	
Pretreatment	To ensure maximum adhesion the substrate must be thoroughly clean, free from grease, oil, rust, mill scale or any other contaminant. Pretreatment chemicals may break down at high temperatures and the pre-treatment chemical supplier should be consulted before application. Shot-blasting to SA2.5 is often used to clean the surface and provide a key for adhesion.		
Mechanical Tests	Unless otherwise specified, all tests were carried out under laboratory conditions on 0.8mm degreased and zinc phosphated steel panels. A powder coating DFT of 40-50 microns was used.		
	Hardness	ISO 2815 Buchholtz Indentation	>80
	Flexibility	ISO 1519 Cylindrical Mandrel	Pass >5mm
	Adhesion	ISO 2409 2mm Crosshatch	Pass Gt0
	Cupping	ISO 1520 Erichsen	Pass >4mm
	Impact	BS 3900: Part E7	>10kg cm (N)
Corrosion and Durability	Sulphur Dioxide	Kesternich Test ISO 3231	After 24 cycles, infiltration <1mm from scratch
	Neutral Salt Fog	ASTM B117 (500 hours)	Corrosion creep <2mm from scratch Adhesion – Gt0
	Boiling Water	2 hours boiling water	No defects or detachments
	Humidity	BS3900: Part F2	Pass. 1000 hours without any effect.
	Accelerated Weathering	UVB-313 200 hours	Pass – no cracking Reduction of gloss and yellowing.
	Exterior Durability	After 12 months, no film breakdown or reduction in protective properties. Reduction of gloss and yellowing.	

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Heat Resistance	260°C for 3 hours	excellent adhesion. No chalking.
	400°C for 2 hours	good adhesion*. No chalking.
	500°C for 2 hours	excellent adhesion. No chalking.
	Butane torch for 2 minutes	excellent adhesion. No chalking.
	*pyrolysis (sintering) of the film occurs at approximately 400°C, at this temperature the organic components of the coating burn off to leave an inorganic lattice. This process can cause a reduction in the adhesion at this temperature.	
Application	The coating achieves best results when sprayed to a dry film thickness (DFT) not exceeding 40 microns: 30 microns is ideal. A thicker film results in a steady reduction in the adhesion properties of the powder coating.	
Colour Availability	A matt metallic silver-grey	
Restriction of Hazardous Substances (RoHS/RoHS2)	This product conforms to the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations (RoHS and RoHS2) Directive. It does not contain any compounds of lead, mercury, cadmium or hexavalent chromium; nor does it contain polybrominated biphenyls (PBBs) or polybrominated diphenyl ether (PBDE).	
Health & Safety	This product is intended for use only by professional applicators in industrial environments. Consult the relevant health and safety data sheet indicated in the box label before use.	