

Energy Solutions Electrical Steel Coating

Voltatex[®] Product Overview



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Voltatex® Product Overview



Wet Varnish Properties

Product	Thermal Class (IEC 60085)	Chemical Base	Dilutant	VOC [%]	Flow Time DIN 53211 4mm cup, 20°C [sec]	Solid Content DIN EN ISO 3251 2h, 110°C, 1g [%]	Density 20°C [g/cm³]	PH Value DIN ISO 976 20°C	Storage Stability 5°C - 30°C [month]
C3 - Portfolio									
Voltatex® 1230	180°C (H)	Alkyd-Melamine	Water	10,3	100-130	43-50	1.05 - 1.10	7.5 - 9.5	6
Self - Bonding Portfolio									
Voltatex® 1175W	180°C (H) (1)	Epoxy	Water	1175W: 9.4 1075K: 0	60-90	47-53	1.05 - 1.15	n.a.	1175W: 4 1075K: 4
Voltatex® 1175W Fast	180°C (H) (1)	Epoxy	Water	1175W: 9.4 1075F: 25	60-90	47-53	1.05 - 1.15	n.a.	1175W: 4 1075F: 4
Voltatex® 1175WL	180°C (H) (1)	Epoxy	Water	10.4	35-55	38-48	1.05 - 1.15	n.a.	4
C5 - Alkaline Portfolio									
Voltatex® 1120	180°C (H)	Alkyd-Melamine	Water	4.8	40-80	38-44	1.10 - 1.20	7.5 - 9.5	6
Voltatex® 1250	180°C (H)	Polyurethane-Melamine	Water	1	105-175	50-60	1.15 - 1.30	7.5 - 9.5	8
Voltatex® 1250V	220°C (R)	Polyurethane-Melamine	Water	7.6	120-175	42-48	1.10 - 1.30	7.5 - 9.5	8
Voltatex® 1250V Fast	220°C (R)	Polyurethane-Melamine	Water	10.9	60-90	40-45	1.10 - 1.30	7.5 - 9.5	4
C5 - Acidic Portfolio									
Voltatex® 1253	>220°C (R)	Acidic, water dilutable polyol/ blocked isocyanate resin	Water	3.2	60-90	50-58	1.30 - 1.50	1.5 - 3.5	4
Voltatex® 1254	>220°C (R)	Acidic, water dilutable polyol/ blocked isocyanate resin	Water	3.2	15-25	39-44	1.10 - 1.30	1.5 - 3.5	4
Voltatex® 1255	>220°C (R)	Acidic, water dilutable acrylic resins combined with phosphates and specific fillers	Water	2.1	20-60	43-51	1.10 - 1.30	1.5 - 3.5	4
C6 - Portfolio									
Voltatex® 1151A	180°C (H)	Alkyd-Melamine	Water	5	110-150	70-75	1.70 - 1.90	7.5 - 9.5	12
Voltatex® 1151E	180°C (H)	Alkyd-Melamine	Water	5.2	110-150	73-78	1.70 - 1.90	7.5 - 9.5	9
Voltatex® 1151S	180°C (H)	Alkyd-Melamine	Water	5.8	95-125	70-77	1.70 - 1.90	8.0 - 9.5	9
Voltatex® 1262	180°C (H)	Polyurethane	Water	15.3	80-150	55-60	1.45 - 1.65	7.5 - 8.5	6

Application Properties

Product	Film Thickness Range [µm]	Curing Temperature Range (PMT to reach) [°C]	Coating Productiveness (theoretical) [m² / kg / µm]	Density of the dry film (theoretical) [g / cm³]
C3 - Portfolio				
Voltatex® 1230	0.5 - 6	220 - 260	390	1.15
Self - Bonding Portfolio				
Voltatex® 1175W/ 1075K (9:1)	0.5 - 7	240 - 260	440	1.20
Voltatex® 1175W/ 1075 F (9:1)	0.5 - 7	160-200	440	1.20
Voltatex® 1175WL	0.5 - 7	230 - 260	370	1.17
C5 - Alkaline Portfolio				
Voltatex® 1120	0.5 - 3	245 - 255	300	1.38
Voltatex® 1250	0.5 - 5	250 - 290	370	1.54
Voltatex® 1250V	0.5 - 5	210 - 290	350	1.44
Voltatex® 1250V Fast	0.5 - 5	150 - 260	330	1.46
C5 - Acidic Portfolio				
Voltatex® 1253	0.5 - 6	240 - 260	300	2.00
Voltatex® 1254	0.5 - 3	250 - 270	300	1.56
Voltatex® 1255	0.5 - 5	250 - 270	295	1.55
C6 - Portfolio				
Voltatex® 1151A	2 - 10	200 - 240	250	3.04
Voltatex® 1151E	2 - 10	200 - 240	300	2.58
Voltatex® 1151S	2 - 10	200 - 240	280	2.62
Voltatex® 1262	3.5 - 10	240 - 300	250	2.35

Dry Film Properties

Product	Humidity Test (1.00% @ 40 °C) DIN EN ISO 6270-2 Degree of Rusting DIN EN ISO 4628-3 40 °C, 100 % Humidity [W.cm² / Lamella]	Salt-Spray Test DIN EN ISO 9227 Degree of Rusting DIN EN ISO 4628-3 5h / R10	Overcoat-ability with all Voltatex® ESC 390	Adhesion Cross Cut Test DIN EN ISO 2409 Gt0B
C3 - Portfolio				
Voltatex® 1230	[W.cm² / Lamella]	5h / R10	390	Gt0B
Self - Bonding Portfolio				
Voltatex® 1175W/ 1075K (9:1)	24h / R10	5h / R10	440	Gt0B
Voltatex® 1175W/ 1075 F (9:1)	24h / R10	5h / R10	440	Gt0B
Voltatex® 1175WL	24h / R10	5h / R10	370	Gt0B
C5 - Alkaline Portfolio				
Voltatex® 1120	24h / R10	5h / R10	300	Gt0B
Voltatex® 1250	24h / R10	5h / R10	370	Gt0B
Voltatex® 1250V	24h / R10	5h / R10	350	Gt0B
Voltatex® 1250V Fast	24h / R10	5h / R10	330	Gt0B
C5 - Acidic Portfolio				
Voltatex® 1253	24h / R10	5h / R10	300	Gt0B
Voltatex® 1254	24h / R10	5h / R10	300	Gt0B
Voltatex® 1255	24h / R10	5h / R10	295	Gt0B
C6 - Portfolio				
Voltatex® 1151A	24h / R10	5h / R10	250	Gt0B
Voltatex® 1151E	24h / R10	5h / R10	300	Gt0B
Voltatex® 1151S	24h / R10	5h / R10	280	Gt0B
Voltatex® 1262	24h / R10	5h / R10	250	Gt0B

(1) Temperature resistance is related to the test given in IEC 60404-12 and not related to the bonding behaviour of the coating

Dry Film Properties

Product	Pencil Hardness DIN EN 13523-4	Flexibility Cylindrical Mandrel DIN EN ISO 1519, Type 2	Surface Insulation Resistance ASTM A 717-06	TIG-Welding SEP 1210	Short Term Temperature Resistance DIN IEC 60404-12
		[mm]	typical film thickness [μm] / [$\text{W}\cdot\text{cm}^2$ / Lamella]		T [$^{\circ}\text{C}$] / t [h] / atmosphere
C3 - Portfolio					
Voltatex® 1230	9H	5	3 / >50	n.a.	n.a.
Self - Bonding Portfolio					
Voltatex® 1175W/ 1075K (9:1)	9H	5	5 / >500	n.a.	n.a.
Voltatex® 1175W/ 1075 F (9:1)	9H	5	5 / >500	n.a.	n.a.
Voltatex® 1175WL	9H	5	5 / >500	n.a.	n.a.
C5 - Alkaline Portfolio					
Voltatex® 1120	9H	5	2 / >60	up to 2 μm	850 / 2 / inert
Voltatex® 1250	9H	5	2 / >50	up to 5 μm	850 / 2 / inert
Voltatex® 1250V	9H	3	2 / >50	up to 3 μm	850 / 2 / inert 400 / 8 / air
Voltatex® 1250V Fast	9H	3	2 / >50	up to 3 μm	850 / 2 / inert 400 / 8 / air
C5 - Acidic Portfolio					
Voltatex® 1253	9H	3	2 / >100	up to 3 μm	850 / 2 / inert 600 / 8 / air
Voltatex® 1254	9H	3	1 / >50	up to 3 μm	850 / 2 / inert 600 / 8 / air
Voltatex® 1255	9H	5	3 / >100	up to 3 μm	850 / 2 / inert 600 / 8 / air
C6 - Portfolio					
Voltatex® 1151A	9H	5	5 / >1500	n.a.	n.a.
Voltatex® 1151E	9H	3	5 / >1500	n.a.	n.a.
Voltatex® 1151S	9H	5	5 / >1500	n.a.	n.a.
Voltatex® 1262	9H	3	5 / >1500	n.a.	n.a.

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