## **Energy Solutions - Impregnating Resins**

## Voltatex® Thinner

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Voltatex® T031	Unsaturated aromatic hydrocarbon, clear, transparent and specially stabilized reactive thinner	6 months	<20 @ 23°C (4mm)	≈ 0,7	Can be added to Impregnating Resins Voltatex® 4000 series to adjust the required viscosity
Voltatex® T032	Unsaturated aromatic hydrocarbon, clear, transparent and specially stabilized reactive thinner	6 months	<20 @ 23°C (4mm)	≈ 0,8	Can be added to Impregnating Resins Voltatex® 4100 series to adjust the required viscosity
Voltatex® T033	Unsaturated methacrylate ester, clear, transparent and specially stabilized reactive thinner	6 months	<20 @ 23°C (4mm)	10-14	Can be added to Impregnating Resins Voltatex® 4200 series to adjust the required viscosity
Voltatex® T034	Unsaturated acrylate ester, clear, transparent and specially stabilized reactive thinner	6 months	-	60-100	Can be added to Impregnating Resins Voltatex® 4300 series to adjust the required viscosity, monomerfree, VOC-free
Voltatex® T035	Unsaturated methacrylate ester, clear, transparent and specially stabilized reactive thinner	6 months	-	≈ 30	Can be added to Impregnating Resins Voltatex® 4300 series to adjust the required viscosity; monomerfree, VOC-free
Voltatex® T040	Water, dest.	6 months	-	≈ 1	Can be added to Voltahyd series to adjust the required viscosity, VOC-free
Voltatex® T041	Waterbased amine solution, clear, transparent thinner and stabilizer	12 months	-	≈ 1	For stabilization of dipping tanks with Voltahyd 2220
Voltatex® T042	Waterbased solution clear, transparent thinner and accelerator	6 months	-	≈ 1	Accelerator for spray applications of Voltahyd series, VOC-free



Axalta Coating Systems Germany GmbH & Co. KG **Energy Solutions** Technical Service Christbusch 25 D-42285 Wuppertal

electricalinsulation@axalta.com

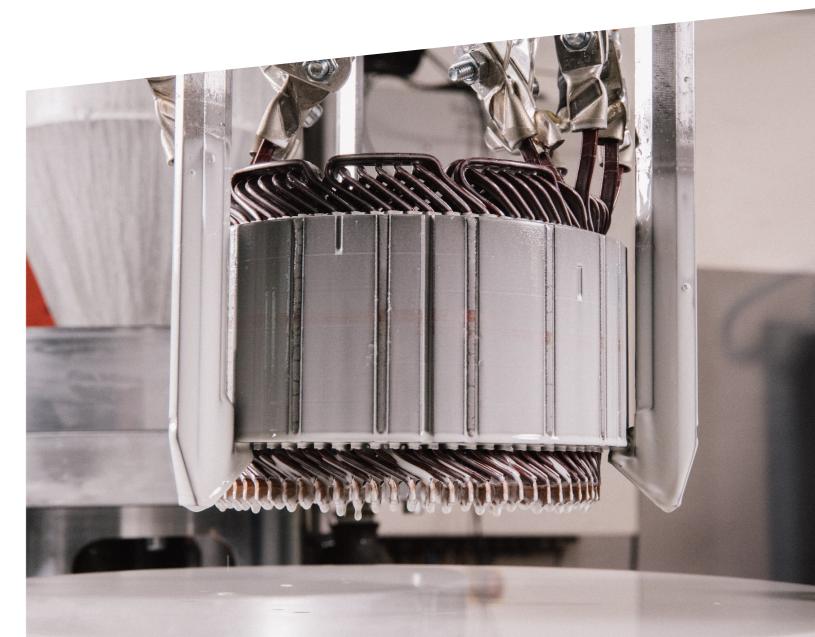






# **Energy Solutions** Impregnating Resins Product Overview Voltabas, Voltahyd,

Voltatex® (Additives, Thinners, Cleaners)





# **Energy Solutions - Impregnating Resins**

Thermal UL-Class Recog-

180°C (H)

Voltabas, Voltahyd

Key Characteristics

Unsaturated polyesterimide

resin, single component, VOC-free

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Voltabas	Modified unsaturated polyester resin,	180°C (H)	0	1000-1700	20.0-40.0 @ 100°C	≈0.8	2h
0302	single component, VOC-free	100 C (11)		1000-1700	20.0-40.0 @ 100 C	~0.0	@150°C
Voltabas 0303	Modified unsaturated polyester resin, single component, VOC-free	180°C (H)	<b>&gt;</b>	300-500	20.0-40.0 @ 100°C	≈0.6	1-2h @150°C
Voltabas 0307	Unsaturated polyester resin, epoxy-modified, single component, VOC-free	180°C (H)	•	300-500	20.0-40.0 @ 100°C	≈0.8	2h @150℃
Voltabas 0307 TX	Unsaturated polyester resin, epoxy-modified, thixotropic single component, VOC-free	180°C (H)	•	300-500	20.0-40.0 @ 100°C	≈0.9	2h @ 150°C

**Gel Time** 

8.0-12.0 @ 90°C

Typical Curing

15 min @ 150°C

≈0.6

Product	Key Characteristics	Thermal Class	UL- Recog-	<b>Viscosity</b> @ 25°C	<b>Flow Time</b> DIN 53211	Typical Curing Time tack free /
		(IEC 60085)	nition	DIN 53019 [mPas]	[s]	ready to assembly

1000-2000

#### Finishing Varnish/ Topcoat

Voltabas

0310 M

Voltahyd 2220 red	Modified hybrid resin, single component, water based, low emission red pigmented	(⊘)	×	200-450	70-150 @ 23°C (4mm)	45-60 min @ 25°C/ 24-36 h @ 25°C
Voltahyd 2220 grey	Modified hybrid resin, single component, water based, low emission grey pigmented	(⊘)	×	200-450	80-160 @ 23°C (4mm)	45 min @ 25°C/ 24 h @ 25°C

#### **Conductive Varnish**

Voltahyd 2300	Modified alkyd resin, waterborne, single component, specially pigmented	×	×	300-1000	-	NA/ 2-5 min @ 140°C

Shelf Life ≤ 25°C	Product Description	Typical Application	Dip & Bake (atmospheric)	Vacuum Process	VPI	Hot Dip- ping	Resistance Heating Process	UV- Curable	Trickle	Roll- Dip
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### suitable for:

12 months	Low viscosity	Low voltage stators, rotors, transformers, (wind) generators	<b>Ø</b>	0	•	<b>Ø</b>	0	×	0	•
12 months	Very low viscosity	Low voltage stators, rotors, transformers, (wind) generators	<b>Ø</b>	•	<b>Ø</b>	•	<b>Ø</b>	×	<b>Ø</b>	•
12 months	Very low viscosity, low crack tendency	Low voltage stators, rotors, transformers, (wind) generators	<b>Ø</b>	•	0	•	•	×	<b>Ø</b>	0
12 months	Low draining losses, thixotropy adjustable, very low viscosity, low crack tendency	Low voltage stators, rotors, transformers, (wind) generators	•	•	0	0	•	×	×	0
3 months	Low viscosity, high reactive, short curing time	low voltage, small rotors and stators (e.g. alternators)	×	×	×	×	×	×	•	×

Shelf Life ≤ 25°C	Product Description	Typical Application	Dip & Bake (atmospheric)		Roll-Dip
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## suitable for:

6 months	Quick drying, additional protection against external influences, mould resistance, tested in acc. with EN 45545-2, good adhesion to steel, galvanized substrates and aluminum	low voltage, transformers, stators, traction motors, (wind) generators	•	•	×
6 months	Quick drying, additional protection against external influences, mould resistance, tested in acc. with EN 45545-2, good adhesion to steel, galvanized substrates and aluminum	low voltage, transformers, stators, traction motors	•	•	×

6 months	Quick drying, provide electrical conductivity on surfaces, air or fast oven drying, good adhesion on steel, glass and e.g. PET	Corona shielding	•	•	•

# **Energy Solutions - Impregnating Resins**

Voltatex® Cleaner, Additive

Product	Key Characteristics	Shelf Life ≤ 25°C	Flash Point	Product Description
Cleaning Ag	gent			
Voltatex® T050	Propylenglycol ester, clear, transparent solvent mixture	12 months	46°C	Excellent cleaning properties for uncured residues of varnishes or resins, quick-drying surface
Voltatex® T060	Dibasic ester, clear, transparent solvent mixture	12 months	100°C	Excellent cleaning properties for uncured residues of solventborne/solventfree varnishes or resins
Water- borne Prepclean 3910 WB	Clear, transparent mixture of water and solvents	60 months	68°C	Cleaner for residues of Voltahyd series or other waterbased products, also used as preparatory cleaner

Product	Key Characteristics	Shelf Life ≤ 25°C	Product Description
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#### Additive

Voltatex® H140	Yellow, pasty liquid hardener solu- tion, free of peroxides	6 months	Can be added to Impregnating Resins (based on unsaturated polyester/polyesterimide) for adjusting the reactivity
Voltatex® H151	Organic peroxide white, fine-grained powder with 50% active ingredient	6 months	Curing agent for low temperature curing 80 - 120 °C
Voltatex® A341	Organic metal compound, dark-violet liquid	90 months	Catalyst for polymerization at room temperature of impregnating resins (based on unsaturated polyester / polyesterimide) with MEK-peroxide or Voltatex® H151
Voltatex® A200	Inhibitor, dark-brown liquid	12 months	Can be added to significantly reduce reactivity or stabilizing of dipping tanks with unsaturated polyester / polyesterimide
Voltatex® A401	Polyhydroxycarboxylic acid amid, transparent to slightly brown liquid, thixotropy agent	6 months	Can be added to Voltatex® gel coats or Voltabas 0307 TX for enhancing the viscosity

<sup>( ) =</sup> conditionally recommended (please consult us)

<sup>× =</sup> not recommended