

DuPont™ Voltatex® 9200

TECHNICAL DATA SHEET

Chemical base: THEIC- modified polyvinylformal

Voltatex® 9200 represents a class of magnet wire enamel based on polyvinylformal with different solid contents such as Voltatex® 9218 and Voltatex® 9226.

The THEIC-modified polyvinylformal wire enamel is superior by its excellent mechanical properties. Apart from the good dielectric properties, the enamel shows outstanding chemical resistance which makes the wire suitable for use in hermetic applications as well as in oil filled transformers acc. to IEC60 851-4.

Voltatex® 9200 enamelled magnet wires correspond to IEC 60317-12.

Enamelling technology

Voltatex® 9200 can be used to coat magnet wires in the diameter range from approx. 0.3 mm up to 5.0 mm, round and rectangular conductors, single and heavy build. Voltatex® 9200 may be processed with convection or recirculating air ovens, both horizontal and vertical type and is mainly applied by dies.

Voltatex® 9200 can be supplied at different viscosities and solid contents as listed below in table 1 to fulfil specific machine and application requirements.

Table 1: Standard parameters

	Voltatex® 9218	Voltatex® 9226
solid content (1g, 1h, 180 °C)	18 % ± 1 %	26 % ± 1 %
viscosity at 25 °C DIN 53015	4,000 mPa·s – 5,000 mPa·s	8,000 mPa·s – 12,000 mPa·s
diluent	Voltatex® 9968	Voltatex® 9968

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Table 2: Enamelling conditions

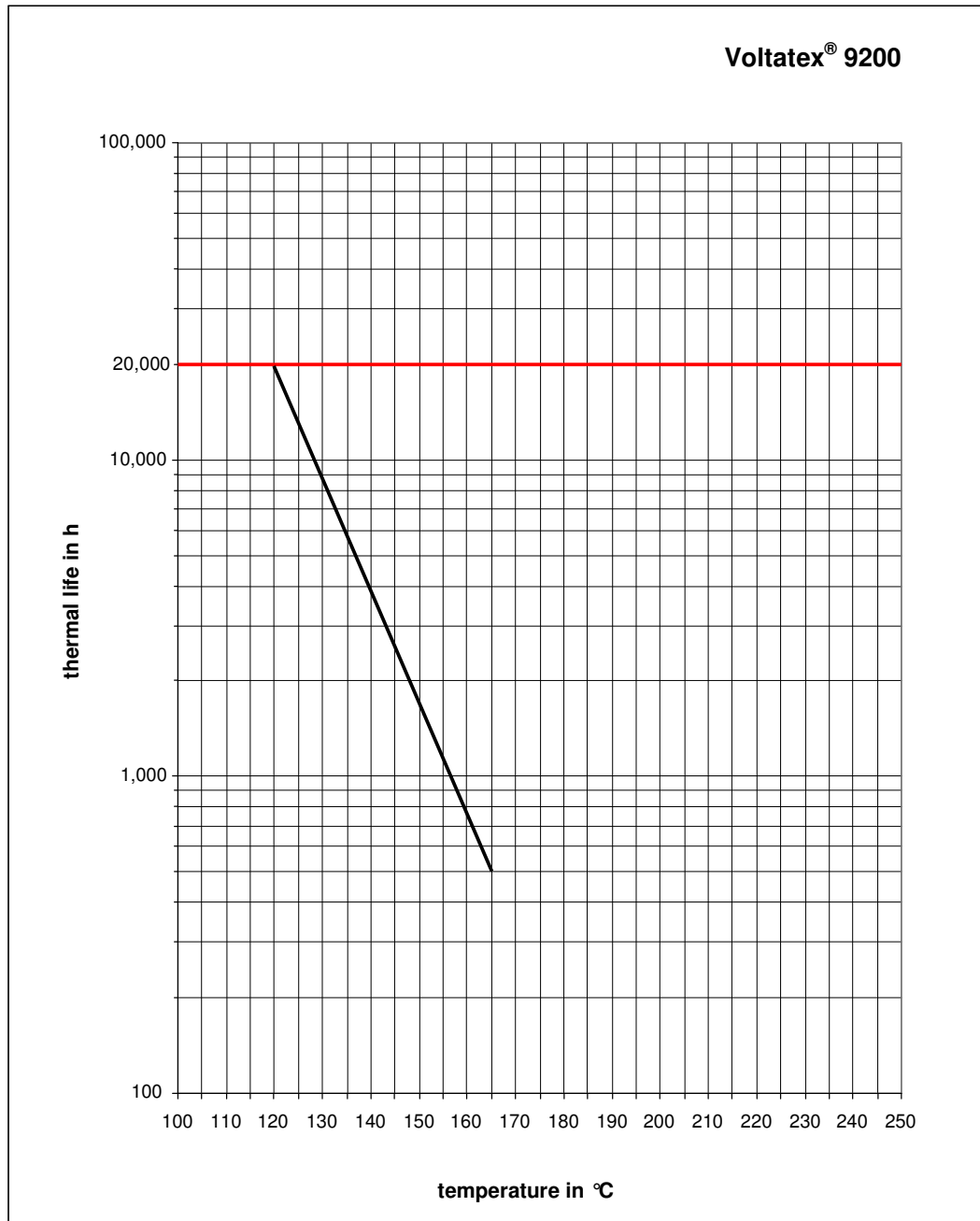
wire enamel	Voltatex® 9218
recirculating air oven	8 m, vertical
application	dies, 8 passes
oven temperature	450 °C
conductor diameter	1.0 mm
enamelling speed	45 m/min
increase in diameter	65 µm

Table 3: Test results

flexibility and adherence, mandrel test 1 x d with pre-stretching of	20 %
heat shock: 1 x d, 30 min.	240 °C
cut-through temperature: tested	245 °C
resistance to abrasion: mean force minimum force	16.1 N 15.2 N
resistance to solvents, given as pencil hardness: as delivered IEC standard solvent DuPont™ Voltatex® impregnating varnishes DuPont™ Voltatex® UP-impregnating resins DuPont™ Voltatex® EP-impregnating resins	6 H 6 H 6 H 6 H 6 H
dielectric breakdown voltage, twisted pair: at room temperature	7,700 V
dissipation factor tan δ-intersection point	106 °C
temperature index acc. to ASTM D 2307, 20,000 h value (figure 1)	TI/120

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