

DuPont™ Voltatex® 6700

TECHNICAL DATA SHEET

Chemical base: Polyurethane, modified

Voltatex® 6700 represents a class of modified polyurethane based wire enamel for the production of solderable magnet wires with different solid contents such as Voltatex® 6725 and Voltatex® 6729.

Voltatex® 6700 can be applied in the diameter range preferably from approx. 0.03 mm up to approx. 1.30 mm, single and heavy build. Application is possible by all convection or recirculating air ovens both horizontal and vertical type.

Voltatex® 6700 fulfils the requirements for thermal class 200 both for temperature index and heat shock.

Pin-hole and crazing resistance according to Japanese standard is a major feature of magnet wires enamelled with Voltatex® 6700.

Compared to Voltatex® 6500 with an identical temperature index class, the other thermal properties of Voltatex® 6700 are superior.

Voltatex® 6700 is listed in UL file E102069.

Enamelling technology

Voltatex® 6700 is used for the production of solderable magnet wire and can be applied by dies or felt. Voltatex® 6700 enamelled magnet wires are characterised by an excellent solderability.

Voltatex® 6700 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® 6725	Voltatex® 6729
solid content (1g, 1h, 180 °C)	25 % ± 1 %	29 % ± 1 %
flow time (4 mm, 23 °C) ISO 2431	25 s – 35 s	30 s – 40 s
viscosity at 25 °C DIN 53015	approx. 120 mPa·s	approx. 140 mPa·s
diluent	Voltatex® 9968	Voltatex® 9968

DuPont™ Voltatex® 6700

TECHNICAL DATA SHEET

Table 2: Enamelling conditions

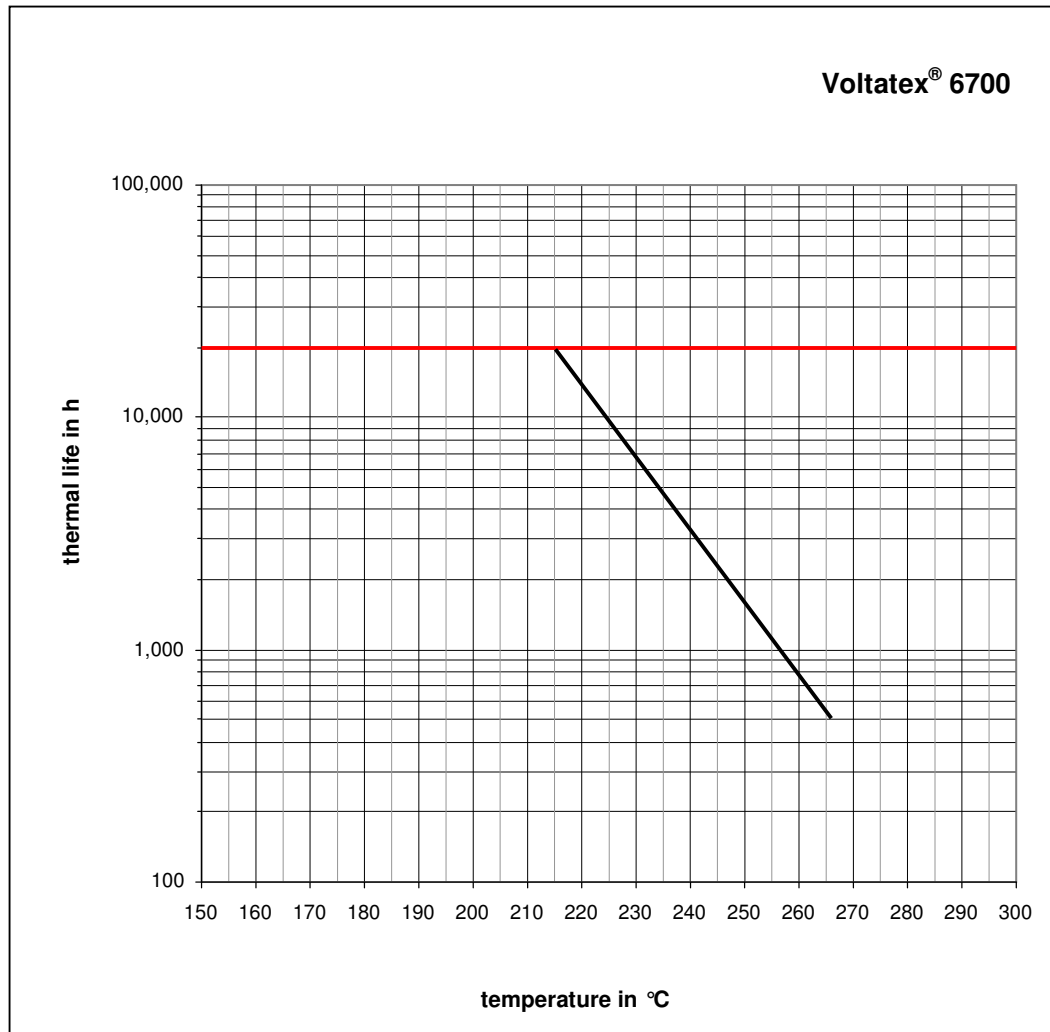
wire enamel	Voltatex® 6729
recirculating air oven	4 m, horizontal
application	dies, 8 passes
oven temperature	500 °C
conductor diameter	0.30 mm
enamelling speed	90 m/min
increase in diameter	39 µm

Table 3: Test results

flexibility and adherence, mandrel test 1 x d with pre-stretching of	15 %
heat shock: 1 x d, 30 min., 3 x d prestretching 20 %	210 °C 220 °C
cut-through temperature: tested	265 °C
pin-hole-resistance acc. to JIS C 3003	passes
solderability at 375 °C, (Sn/Pb= 60/40)	4.5 s
solderability at 390 °C, (Sn/Pb= 60/40)	1.8 s
resistance to solvents, given as pencil hardness:	
as delivered	4 H
IEC standard solvent	4 H
DuPont™ Voltatex® impregnating varnishes	4 H
DuPont™ Voltatex® UP-impregnating resins	4 H
DuPont™ Voltatex® EP-impregnating resins	4 H
dielectric breakdown voltage, twisted pair: at room temperature	8,720 V
dissipation factor tan δ-intersection point	184 °C
temperature index acc. to ASTM D 2307, 20,000 h value (figure 1)	TI/211

DuPont™ Voltatex® 6700

TECHNICAL DATA SHEET



DuPont™ Voltatex® 6700

TECHNICAL DATA SHEET

Contact:

DuPont Performance Coatings GmbH
Voltatex® Technical Service
Christbusch 25
42285 Wuppertal
Germany

Phone: +49 202 529-2675 / -2335 / -2387
Fax: +49 202 529-2821
e-mail: Voltatex@dupont.com

www.Voltatex.dupont.com

The information provided herein corresponds to our knowledge on the subject at the date of its publication. This information may be subject to revision as new knowledge and experience becomes available. The data provided fall within the normal range of product properties and relate only to the specific material designated; these data may not be valid for such material used in combination with any other materials or additives or in any process, unless expressly indicated otherwise. The data provided should not be used to establish specification limits or used alone as the basis of design; they are not intended to substitute for any testing you may need to conduct to determine for yourself the suitability of a specific material for your particular purposes. Since DuPont cannot anticipate all variations in actual end-use conditions DuPont makes no warranties and assumes no liability in connection with any use of this information. Nothing in this publication is to be considered as a license to operate under or a recommendation to infringe any patent rights.

© 2008 DuPont. All rights reserved. The DuPont Oval Logo, DuPont™, the miracles of science™ and Voltatex® are registered trademarks or trademarks of E. I. du Pont de Nemours and Company or its affiliates.



The miracles of science™