

## DEUREX® T 49 K

### TECHNICAL INFORMATION

<b>Chemical description:</b>	Fischer Tropsch wax		
<b>Applications:</b>	<p><u>PVC and other plastics</u></p> <ul style="list-style-type: none"> <li>- Can be used in all U-PVC and P-PVC applications but also in C-PVC</li> </ul> <p>DEUREX® T 49 K is the best choice of lubricants especially in combination with calcium-zinc and tin stabilizers for rigid PVC products like window profiles, technical profiles, pipes and fittings.</p>		
<b>Properties:</b>	<p>External wax, highly effective wax</p> <ul style="list-style-type: none"> <li>- Delays fusion</li> <li>- Decreases torque and pressure</li> <li>- Decreases melt temperature</li> <li>- Improves gloss of the final product</li> <li>- Dust free</li> </ul>		
<b>Typical dosages:</b>	Depending on the rheological requirements up to 0.5 phr		
<b>Benefits:</b>	<ul style="list-style-type: none"> <li>- Crystalline wax with very narrow c-chain distribution</li> <li>- Very fast solidification, congealing point at 100 °C</li> </ul>		
<b>Technical data:</b>	Colour:	White / Off-white	
	Delivery forms:	<b>DEUREX® T 49 K</b>	= Fine granules
		Minimum	Maximum
	Drop point*:	112 °C	120 °C
	Acid value:		0 mg KOH/g
	Viscosity (140 °C)*:		20 mPas
	Penetration (25 °C)*:		1 mm*10 <sup>-1</sup>
	Density (23 °C):	0.94 g/cm <sup>3</sup>	0.95 g/cm <sup>3</sup>
			Method
			LV 12 (DGF M-III 3)
			DIN EN ISO 2114
			LV 2 (DIN EN ISO3104)
			LV 4 (DIN 51579)
			LV 3 (DIN EN ISO 1183)
	* Part of certificate of analysis		
<b>Approvals:</b>	<p>EU: Regulation (EU) 10/2011 dated 14. January</p> <p>FRG: BfR recommendation XXV</p> <p>USA: FDA 21 CFR §§ 175.105, 175.250, 175.300, 175.320, 176.170, 176.180, 177.1200, 177.1390</p> <p>(Approvals with regard to limitations and migration values in the final application)</p>		
<b>Additional lubricants:</b>	<p><b>DEUREX® E 11 K</b> – Homopolymer PE-Wachs</p> <p><b>DEUREX® E 40 K</b> – Oxidized LDPE wax</p> <p><b>DEUREX® EO 44 K</b> – Oxidized HDPE wax</p> <p><b>DEUREX® TO 80 G</b> – Oxidized Fischer Tropsch wax (hard paraffin)</p>		
<b>Alternative delivery forms:</b>	<b>DEUREX® T 3901 W</b> – Water-based emulsion		

## DEUREX® T 49 K

DEUREX® T 49 K was investigated in a calcium-zinc stabilized window profile formulation containing:

- 100 phr S-PVC (k=67)
- 10 phr coated calcium carbonate, window profile grade
- 4 phr titanium dioxide, rutile, window profile grade
- 6 phr acrylic impact modifier
- 3 phr calcium-zinc stabilizer

The dry blends were mixed up to 120°C in a high speed hot mixer and cooled down to 45°C. After a relaxation time of >12 hours the dry blend was extruded on a parallel twin screw extruder KMD 35-26. The results are summarized in Fig. 1 to Fig. 4. It was also found that DEUREX® T 49 K is very similar to equal in its influence on rheology compared to a standard Fischer-Tropsch wax available on the market.

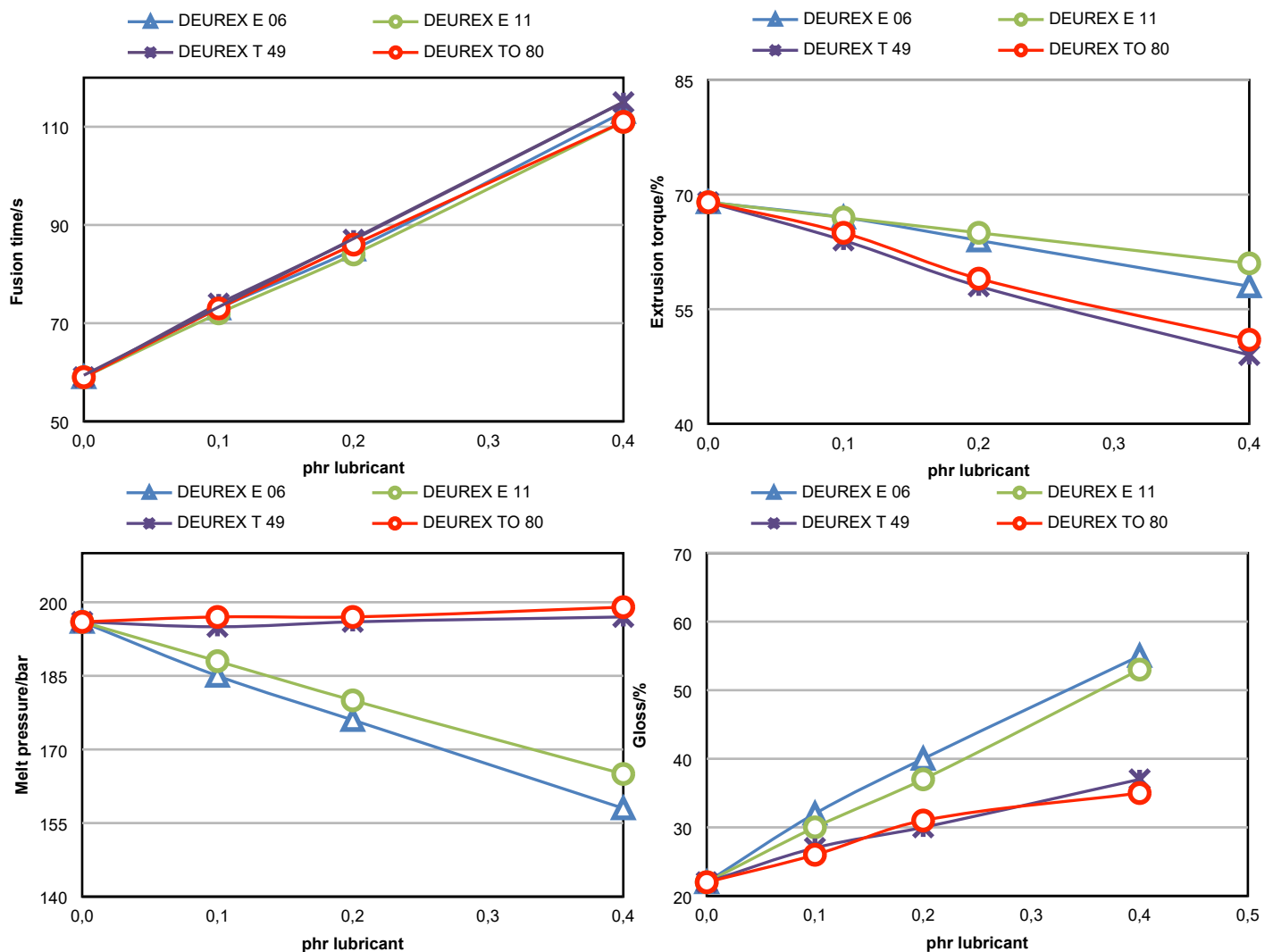


Fig. 1 to Fig. 4 Influence of the dosage of DEUREX® T 49 in comparison to E 06, E 11 and TO 80 on fusion time (Fig. 1), extrusion torque (Fig. 2), melt pressure (Fig. 3) and gloss (Fig. 4)

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