

## DEUREX® E 11 K

### TECHNICAL INFORMATION

<b>Chemical description:</b>	Non polar, low molecular Polyethylene wax		
<b>Applications:</b>	<u>PVC and other plastics</u> - Can be used in all U-PVC and P-PVC applications but also in C-PVC  DEUREX® E 11 K is the best choice of lubricant especially in combination with calcium-zinc and tin stabilizers for rigid PVC products like window profiles, technical profiles, pipes and fittings.		
<b>Properties:</b>	External wax, highly effective wax - Delays fusion - Decreases torque and pressure, decreases melt temperature - Improves gloss of the final product - Synergistic effect in combination with oxidized PE wax by reduction of melt viscosity - Attractive price-performance ratio - Dust free		
<b>Typical dosages:</b>	Depending on the rheological requirements: - up to 0.6 phr for PVC - up to 1.0 phr for C-PVC		
<b>Technical data:</b>	Colour:	White	
	Delivery form:	<b>DEUREX E 11 K</b> = Fine Granules	
		Minimum	Maximum
	Drop point*:	110 °C	120 °C
	Acid value:		0 mgKOH/g
	Viscosity (140 °C)*:		80 mPas
	Penetration:	3 mm*10 <sup>-1</sup>	7 mm*10 <sup>-1</sup>
	Density (23 °C):	0.91 g/cm <sup>3</sup>	0.96 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>	EU: Regulation (EU) 10/2011 dated 18. January 2018 – Ref.-No.: 80000 USA: FDA 21 CFR §§ 177.1520 (c), 175.105, 175.300, 176.170, 176.180, 178.3720 (Approvals with regard to limitations and migration values in the final application)		
<b>Additional lubricants:</b>	<b>DEUREX® E 40 K</b> – Oxidized LDPE wax <b>DEUREX® EO 44 K</b> – Oxidized HDPE wax <b>DEUREX® T 39 K</b> – Fischer Tropsch wax <b>DEUREX® TO 80 G</b> – Oxidized Fischer Tropsch wax (hard paraffin)		
<b>Alternative delivery forms:</b>	<b>DEUREX® E 1101 W</b> – Water-borne polyethylene wax emulsion <b>DEUREX® E 11 B</b> – Off white - very competitive price		

## DEUREX® E 11 K

DEUREX® E 11 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® E 11 K is very similar to equal in its influence on rheology compared to a standard Polyethylene wax available on the market.

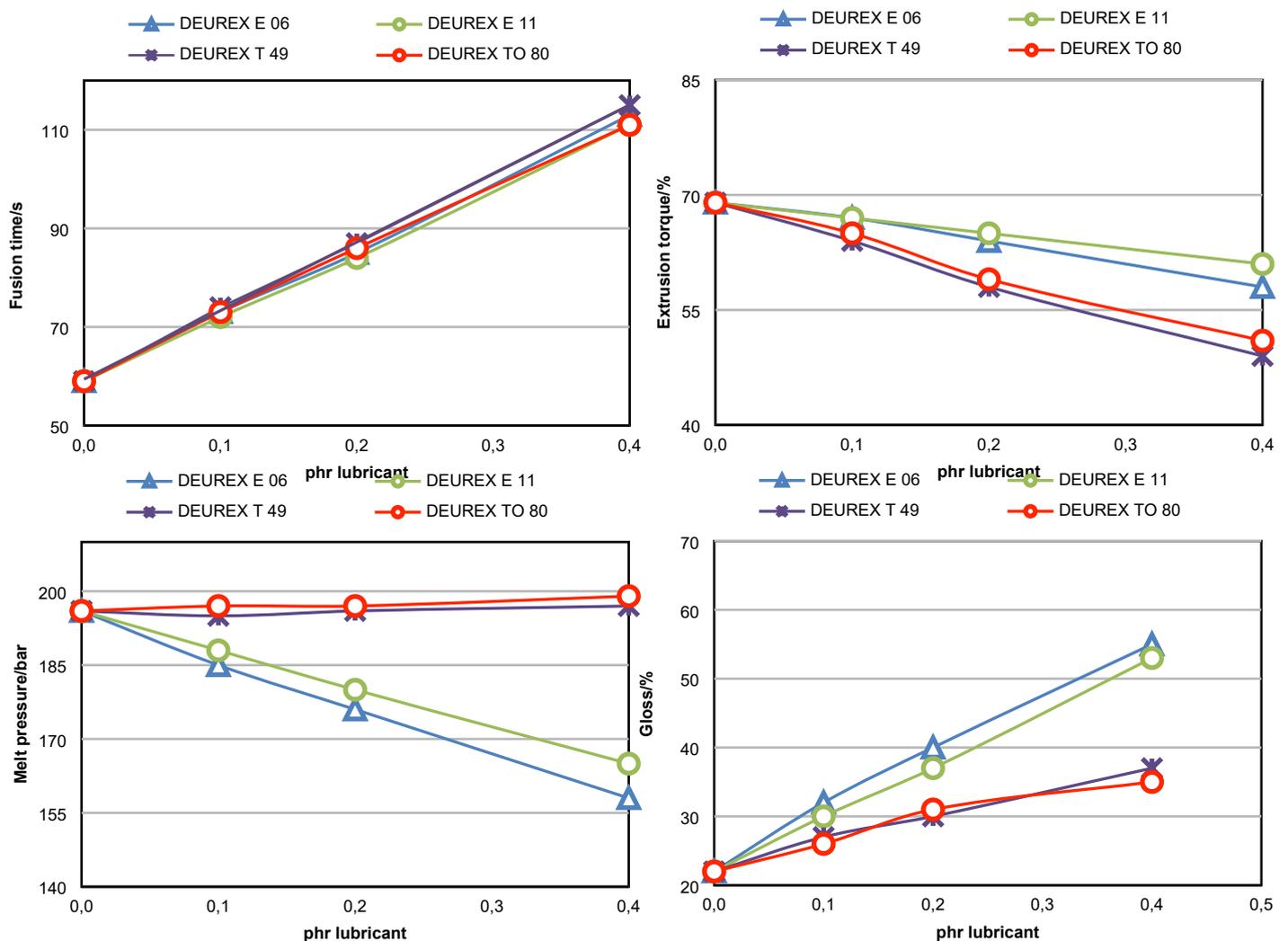


Fig. 1 to Fig. 4 Influence of the dosage of DEUREX® E 11 in comparison to E 06, T 49 and TO 80 on fusion time (Fig. 1), extrusion torque (Fig. 2), melt pressure (Fig. 3) and gloss (Fig. 4)

This data sheet is based on our current knowledge and experience. In view of the individual factors that may affect processing and application, this data does not relieve users from the responsibility of carrying out their own tests and experiments, neither do they imply any legally binding assurance of certain properties. Existing industrial/commercial protective laws have to be considered by the recipient. Updated versions of the data sheet replace all formerly existing versions.