

DEUREX® T 49 G

TECHNICAL INFORMATION

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|------------------------------------|---|-----------------------|---------------------------|
| Chemical description: | Fischer Tropsch wax | | |
| Applications: | <u>PVC and other plastics</u> <div>- Can be used in all U-PVC and P-PVC applications but also in C-PVC</div> DEUREX® T 49 G 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. | | |
| Properties: | External wax, highly effective wax <div>- Delays fusion - Decreases torque and pressure - Decreases melt temperature - Improves gloss of the final product</div> | | |
| Typical dosages: | Depending on the rheological requirements up to 0.5 phr | | |
| Benefits: | <div>- Crystalline wax with very narrow c-chain distribution - Very fast solidification, congealing point at 100 °C</div> | | |
| Technical data: | Colour: White / Off-white Delivery forms: DEUREX® T 49 G = Granules | | |
| | Minimum | Maximum | Method |
| Drop point*: | 112 °C | 120 °C | LV 12 (DGF M-III 3) |
| Acid value: | | 0 mg KOH/g | DIN EN ISO 2114 |
| Viscosity (140 °C)*: | | 20 mPas | LV 2 (DIN EN ISO3104) |
| Penetration (25 °C)*: | | 1 mm*10 ⁻¹ | LV 4 (DIN 51579) |
| Density (23 °C): | 0.94 g/cm³ | 0.95 g/cm³ | LV 3 (DIN EN ISO 1183) |
| * Part of certificate of analysis | | | |
| Approvals: | EU: Regulation (EU) 10/2011 dated 14. January FRG: BfR recommendation XXV USA: FDA 21 CFR §§ 175.105, 175.250, 175.300, 175.320, 176.170, 176.180, 177.1200, 177.1390 (Approvals with regard to limitations and migration values in the final application) | | |
| Additional lubricants: | DEUREX® E 11 K – Homopolymer PE-Wachs DEUREX® E 40 K – Oxidized LDPE wax DEUREX® EO 44 K – Oxidized HDPE wax DEUREX® TO 80 G – Oxidized Fischer Tropsch wax (hard paraffin) | | |
| Alternative delivery forms: | DEUREX® T 3901 W – Water-based emulsion | | |

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.

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DEUREX® T 49 G 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 G is very similar to equal in its influence on rheology compared to a standard Fischer-Tropsch wax available on the market.

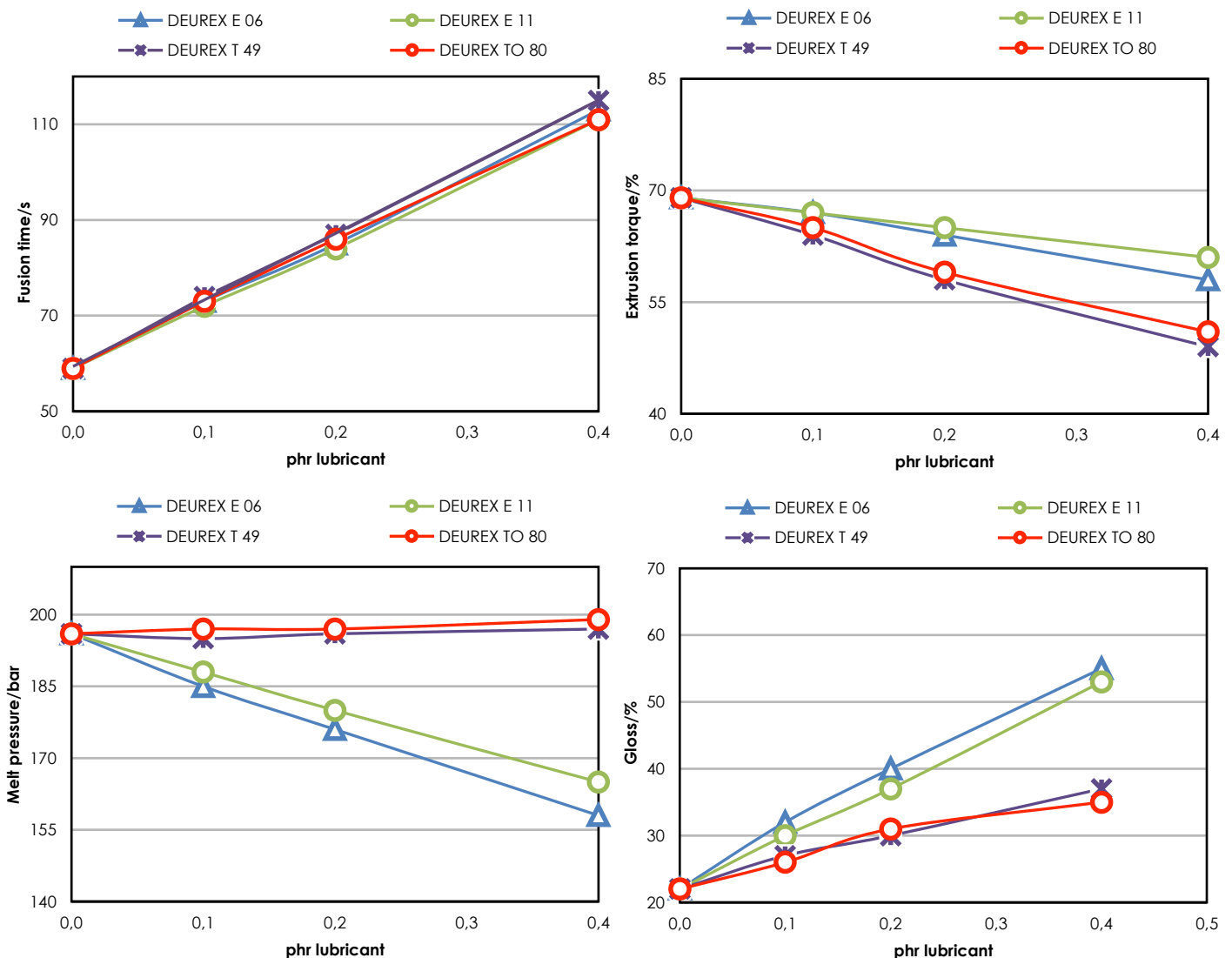


Fig. 1 to Fig. 4 Influence of the dosage of DEUREX® T 49 in comparison to E 06, E 11 and TO 80 on fusion time (Fig. 1), extrusion torque (Fig. 2), melt pressure (Fig. 3) and gloss (Fig. 4)

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