DEUREX®
THE WAX COMPANY

DEUREX® F 64 A

TECHNICAL INFORMATION

Chemical description: Fine powder lubricant pack based on PE coated with PTFE

Applications:

PVC and other plastics

- Can be used in all U-PVC and P-PVC applications but also in C-PVC

DEUREX® F 64 A is the best choice of lubricants especially in combination with calcium-zinc and tin stabilizers for rigid PVC products like window profiles, technical profiles and pipes.

Properties:

External wax combination, highly effective

- Decreases torque, pressure and melt temperature, improves gloss
- Synergistic effect in combination with oxidized PE by reduction of melt viscosity
- Delays and avoids the formation of non-desirable deposits (plate out) on the extruder, on the screw, in the adaptor and in tooling
- Useful for high speed cable extrusion

Typical dosages:

Depending on the rheological requirements:

- 0.2 up to 0.5 phr for PVC
- 0.2 up to 1.0 phr for C-PVC

Technical data:

Colour: White
Delivery form: **DEUREX® F 64 A** = Finest powder, < 150 µm

	Minimum	Maximum	Method
Drop point (wax)*:	110 °C	120 °C	LV 12 (DGF M-III 3)
Density (23 °C) (wax):	0.94 g/cm³	0.95 g/cm³	LV 3 (DIN EN ISO 1183)
Melting point (PTFE)*:	320 °C	340 °C	LV 5 (ASTM D4591)
Density (23 °C) (PTFE):	2.15 g/cm³	2.25 g/cm³	LV 3 (DIN EN ISO 1183)
Shelf life:		24 month (In closed, original containers in compliance with storage conditions)	

* Part of certificate of analysis

Approvals:

EU:Regulation (EU) 10/2011 dated 14. January 2011
USA: FDA 21 CFR §§ 175.105; 175.300; 176.170; 176.180
Approvals with regard to limitations and migration values in the end use application

Alternative delivery forms:

DEUREX® F 60 Micro-Series – Micronized powder with 100% PTFE
DEUREX® F 61 A – Double coated, PTFE and wax are completely embedded
DEUREX® F 62 A – Fully coated, wax completely coated with PTFE
DEUREX® F 63 A – Spot coated, stoichiometrically calculated amount of PTFE
DEUREX® F 6001 W – Water-based dispersion of a micronized PTFE

DEUREX® F 64 A is a special development for applications which tend to plate out on screws, in the adaptor and/or in the tooling. Plate out is the formation of non-desired deposits during extrusion or calendering. The practical experience has shown that it is possible to reduce plate out already at a dosage of 0.2 phr DEUREX® F 64 A up to 70 - 75% of the initial value. The product helps to extend the production time until it is necessary to clean the equipment.

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DEUREX® F 64 A

DEUREX® F 64 A 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® F 64 A** is very similar to equal in its influence on rheology compared to a standard LDPE wax available on the market.

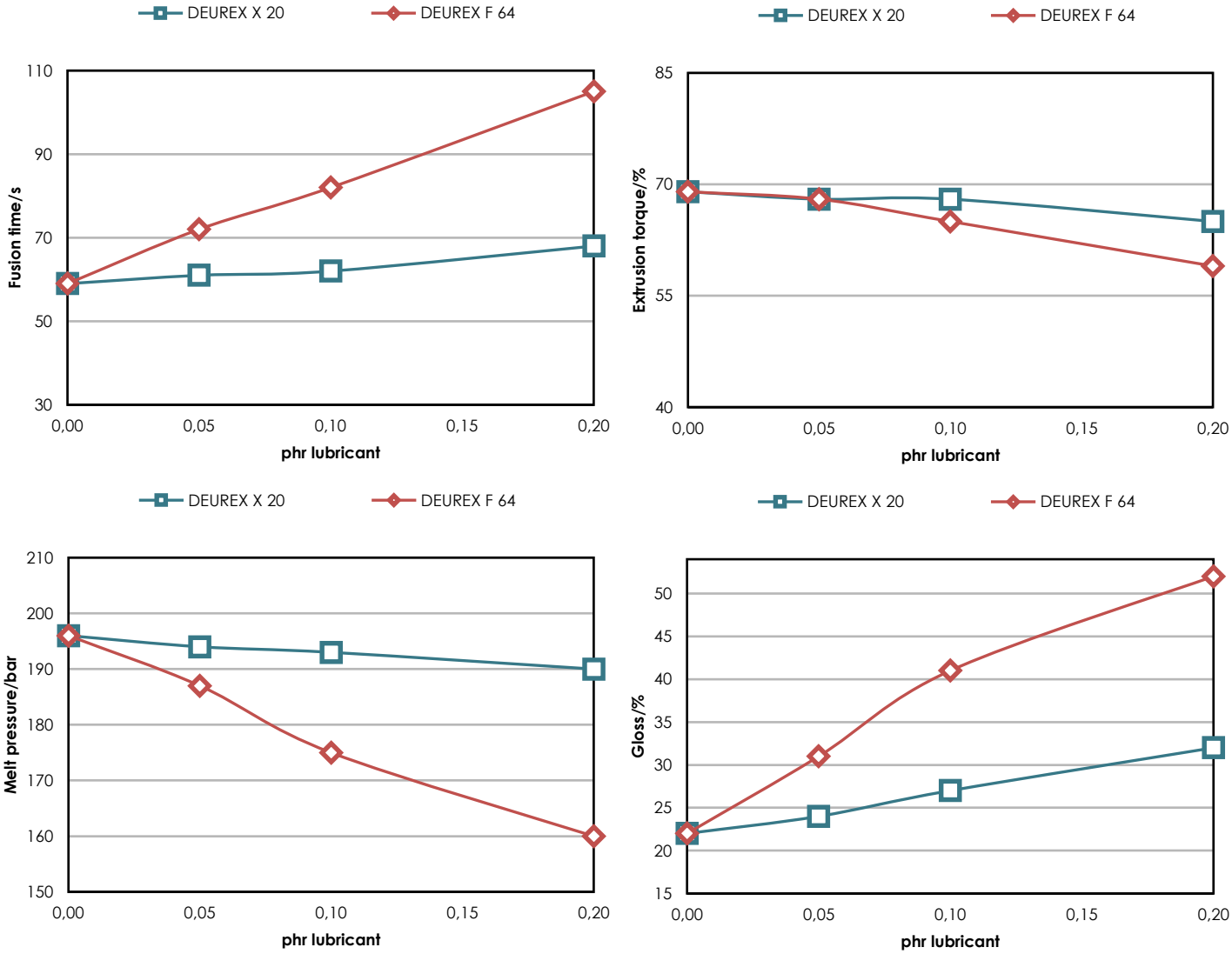

Fig. 1 to Fig. 4 Influence of the dosage of DEUREX® F 64 A in comparison to X 20 K on fusion time (Fig. 1), extrusion torque (Fig. 2), melt pressure (Fig. 3) and gloss (Fig. 4)