

DEUREX® X 20 K

TECHNICAL INFORMATION

Chemical description:	N,N'-Ethylene bis stearamide (EBS), plant based		
Benefits:	<ul style="list-style-type: none"> - On the basis of stearic acid from the sugar cane plant - Temperature stable - Lighter color compared to all other amide waxes - No influence on transparency, nearly odorless 		
Applications:	<p><u>PVC and other plastics</u></p> <ul style="list-style-type: none"> - Can be used in all U-PVC and P-PVC applications but also in C-PVC <p>DEUREX® X 20 K is a special development for applications that require high gloss. It is the best choice of lubricants in combination with calcium-zinc and especially tin stabilizers for rigid PVC products like window profiles.</p>		
Properties:	<p>External & internal wax, highly effective wax</p> <ul style="list-style-type: none"> - Between internal and external lubricant with anti-blocking, anti-tacking, anti-sticking and anti-static effect - Mold release agent - Slip agent - Improves gloss in U-PVC especially in window profile applications - Improves surface resistance to salt, heat, moisture and most solvents - Very useful in combination with tin stabilizers - Might reduce thermal stability when overdosed 		
Typical dosages:	<p>Depending on the rheological requirements:</p> <ul style="list-style-type: none"> - 0.1 up to 0.2 phr for PVC 		
Technical data:	Colour:	White	
	Delivery form:	DEUREX® X 20 K = Fine granules	
		Minimum	Maximum
	Drop point*:	142 °C	151 °C
	Acid value*:		5 mg KOH/g
	Viscosity (160 °C):		20 mPas
	Penetration:	1.0 mm*10 ⁻¹	3.0 mm*10 ⁻¹
	Density (23 °C):	0.98 g/cm ³	1.00 g/cm ³
			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		
Approvals:	<p>EU: Regulation (EU) 10/2011 dated 14. January 2011 – Ref.-No.: 80000</p> <p>USA: FDA 21 CFR §§ 175.105, 175.300, 175.320, 175.380, 175.390, 176.170, 176.180, 177.1200, 177.1210, 177.1350, 177.1400, 177.2470, 177.2480, 178.3860, 179.45, 181.28</p> <p>(Approvals with regard to limitations and migration values in the final application)</p>		
Alternative delivery form:	<p>DEUREX® X 2010 M – Micronized powder, 98% < 10 µm</p> <p>DEUREX® X 20 A – Finest powder, 98% < 150 µm</p>		

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® X 20 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 stabiliser

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® X 20 K is very similar to equal in its influence on rheology compared to a standard N,N'-Ethylene bis stearamide wax.

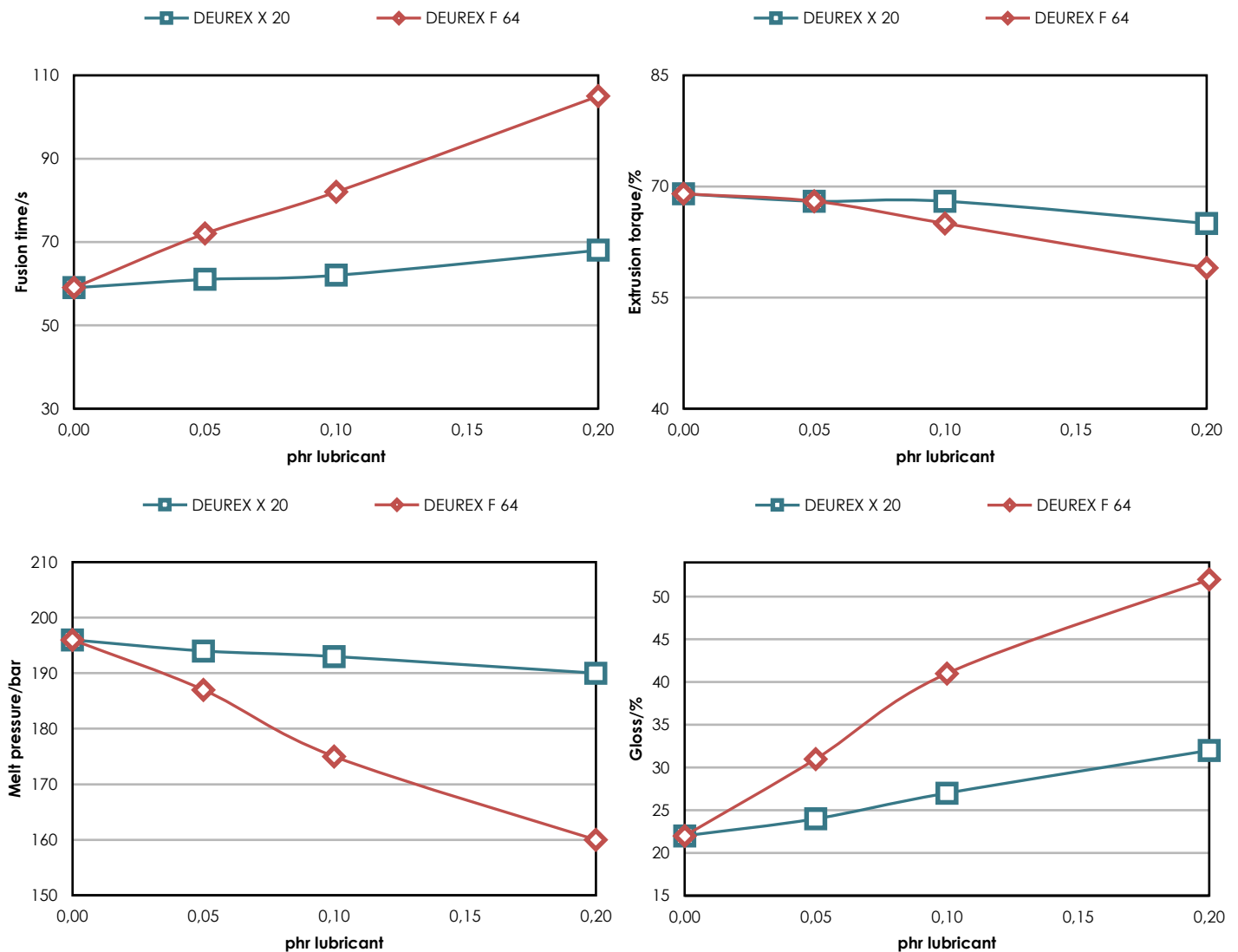


Fig. 1 to Fig. 4 Influence of the dosage of DEUREX® X 20 K in comparison to F 64 on fusion time (Fig. 1), extrusion torque (Fig. 2), melt pressure (Fig. 3) and gloss (Fig. 4)

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