

Ertalon® LFX Product Information

ERTALON LFX Green PA6G

ERTALON LFX is an internally lubricated cast nylon 6 which is self-lubricating in the real meaning of the word. ERTALON LFX, specifically developed for unlubricated moving parts applications, yields a considerable enlargement of the application possibilities of nylons.

This is because of its reduced coefficient of friction (-50%) and improved wear resistance (up to x 10).

Applications

ERTALON® is used for a wide range of industrial components both for Original Equipment Manufacturing and maintenance.

- Some examples:
- Sleeve
- Slide bearings
- Wear pads
- Support
- Guide wheels
- Conveyor rolls
- Tension rollers
- Sleeves for wheels and rollers
- Pulley and Pulley linings
- Cams
- Buffer blocks
- Hammer heads
- Scrapers
- Gear wheels
- Sprockets
- Seal-rings
- Feed screws
- Starwheels
- Cutting and chopping boards
- Insulators, etc.

PROPERTIES	UNITS	VALUE		
Density	g/cm ³	1.135		
Water Absorption	after 24/96 h in water of 23° C	%	40/70	
	at saturation in air of 23° C / 50% RH	%	2	
	at saturation in water of 23°C	%	6.3	
THERMAL PRPERTIES				
Melting point	°C	220		
Thermal Conductivity at 23°C	W/(K.m)	.28		
Coefficient of linear thermal expansion:				
	Average value between 23 and 60°C	m/(m.K)	80 x 10 ⁻⁶	
	Average value between 23 and 100°C	m/(m.K)	90 x 10 ⁻⁶	
Deflection temperature under flexural load: method A: 1.8N/mm ²	°C	85		
Max allowable surface temperature in air:				
	Short periods, a few hrs at a low load	°C	165	
	Continuously: 5000/20000 hours	°C	105/90	
Minimum service temperature	°C	-20		
Flammability: ASTM (Oxygen index)	%	-		
MECHANICAL PROPERTIES @ 23°C				
Tensile stress at yield	dry test specimen	N/mm ²	70/-	
	Test specimens standard atmosphere 23°C/50% RH	N/mm ²	40/-	
Tensile strain at break	dry test specimen	%	20	
	Test specimens standard atmosphere 23°C/50% RH	%	>50	
Tensile modulus of elasticity	dry test specimen	N/mm ²	3000	
	Test specimens standard atmosphere 23°C/50% RH	N/mm ²	1700	
Compression test 1% offset yield strength	dry test specimen	N/mm ²	80	
Creep test in tension; stress to produce 1% strain in 1000 hrs	dry test specimen	N/mm ²	18	
	Test specimens standard atmosphere 23°C/50% RH	N/mm ²	8	
Impact strength – Charpy	dry test specimen	kJ/m ²	≥40	
Notched impact strength Charpy	dry test specimen	kJ/m ²	4	
	Test specimens standard atmosphere 23°C/50% RH	kJ/m ²	12	
	- Izod	dry test specimen	kJ/m ² ; J/m	3 ; 30
	Test specimens standard atmosphere 23°C/50% RH	kJ/m ² ; J/m	6 ; 60	
Ball indentation hardness H358/30 or H 961/30		N/mm ²	145	
Rockwell hardness			M82	
ELECTRICAL PROPERTIES				
Dielectric strength	dry test specimen	kV/mm	22	
	Test specimens standard atmosphere 23°C/50% RH	kV/mm	14	
Volume resistivity	dry test specimen	Ohm.cm	10 ¹⁵	
	Test specimens standard atmosphere 23°C/50% RH	Ohm.cm	10 ¹³	
Surface resistivity	dry test specimen	Ohm	10 ¹⁵	
	Test specimens standard atmosphere 23°C/50% RH	Ohm	10 ¹³	
Dielectric constant:	@ 50Hz	dry test specimen	-	3.5
		Test specimens standard atmosphere 23°C/50% RH	-	6.5
	@ 1MHz	dry test specimen	-	3.1
		Test specimens standard atmosphere 23°C/50% RH	-	3.6
Dissipation factor tan	@ 50Hz	dry test specimen	-	0.015
		Test specimens standard atmosphere 23°C/50% RH	-	0.15
	@ 1 MHz	dry test specimen	-	0.016
	Test specimens standard atmosphere 23°C/50% RH	-	0.05	
Resistance to racking	dry test specimen	-	CTI 600	
	Test specimens standard atmosphere 23°C/50% RH	-	CTI 600	