RILSAMID®
AESNO P40 TL

ISO 16396 - PA12-P, EGHL, C22-004

Rilsamid® AESNO P40 TL resin is a natural polyamide.
This grade is plasticized and designed for tube extrusion.

Rilsamid® AESNO P40 TL resin falls into the PA12-PHL category according to DIN 73378.

PROPERTIES	DRY / COND	UNIT	TEST STANDARD
RHEOLOGICAL PROPERTIES			
Melt Volume-Flow Rate	16 / *	cm³/10 min	ISO 1133
Temperature	235 / *	°C	-
	455 / *	°F	
Load	5 / *	kg	-
	11 / *	lb	
MECHANICAL PROPERTIES			
Tensile Modulus	430 / 380	MPa	ISO 527-1/-2
	62400 / 55100	psi	
Yield Stress	26 / 23	MPa	ISO 527-1/-2
	3770 / 3340	psi	
Yield Strain	24 / 26	%	ISO 527-1/-2
Nominal Strain at Break	>50 / >50	%	ISO 527-1/-2
Charpy Impact Strength, +23°C	- / No Break	kJ/m²	ISO 179/1eU
Charpy Impact Strength, -30°C	- / No Break	kJ/m²	ISO 179/1eU
Charpy Notched Impact Strength, +23°C	- / No Break	kJ/m²	ISO 179/1eA
Charpy Notched Impact Strength, -30°C	- / 5	kJ/m²	ISO 179/1eA
	- / 2.38	ftlb/in²	
Puncture - Maximum Force, -30°C	- / 5600	N	ISO 6603-2
Puncture Energy, -30°C	- / 60	J	ISO 6603-2
THERMAL PROPERTIES			
Melting Temperature, 10°C/min	174 / *	°C	ISO 11357-1/-3
Temp. of Deflection Under Load, 1.80 MPa	46 / *	°C	ISO 75-1/-2
	115 / *	°F	
Temp. of Deflection Under Load, 0.45 MPa	90 / *	°C	ISO 75-1/-2
	194 / *	°F	
Vicat Softening Temperature, 50°C/h 50N	130 / *	°C	ISO 306
	266 / *	°F	

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Coeff. of Linear Thermal Expansion, parallel	140 / *	E-6/K	ISO 11359-1/-2
ELECTRICAL PROPERTIES			
Volume Resistivity	- / 1E9	Ohm* m	IEC 62631-3-1
Surface Resistivity	* / 5E11	Ohm	IEC 62631-3-2
Dielectric (Electric) Strength	- / 24	kV/mm	IEC 60243-1
	- / 610	kV/in	
Comparative Tracking Index	* / 600	-	IEC 60112
OTHER PROPERTIES			
Water Absorption, 23°C, immersion, equilibrium	1.2 / *	%	ISO 62
Density	1030 / 1030	kg/m³	ISO 1183
	1.03 / 1.03	g/cm³	

MAIN APPLICATIONS:
Air brake.
Tubing for use in motor vehicles

PACKAGING:
This grade is delivered dried in sealed packaging (25 kg bags) ready to be processed.

SHELF LIFE:
Two years from the date of delivery. for any use above this limit, please refer to our technical services.

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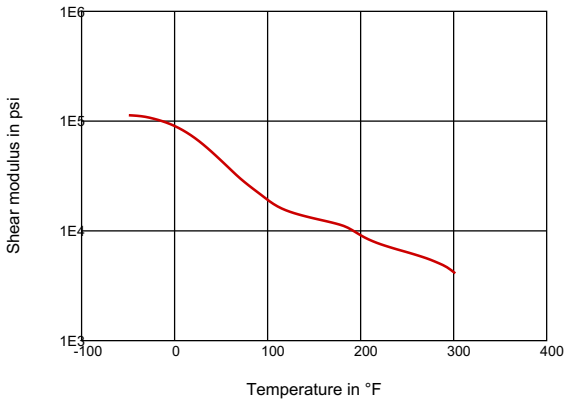
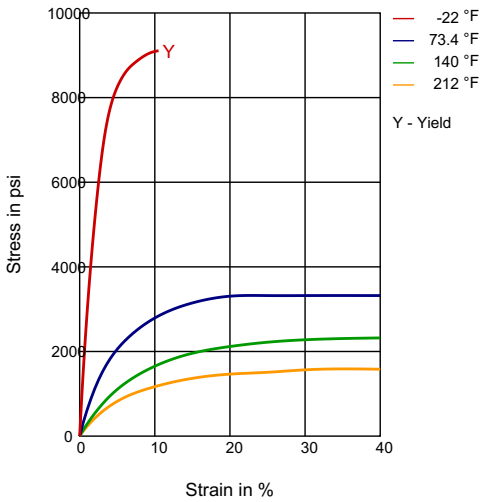
DIAGRAMS

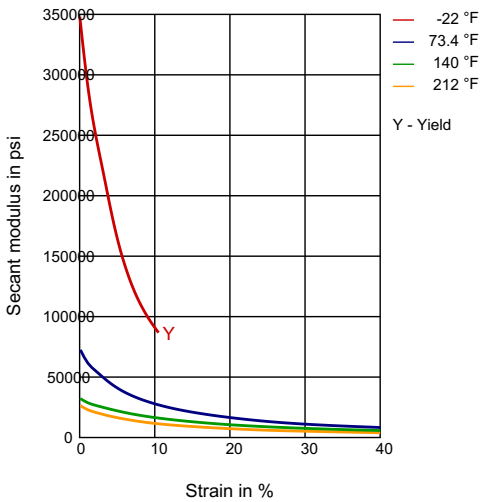
DYN. SHEAR MODULUS-TEMPERATURE



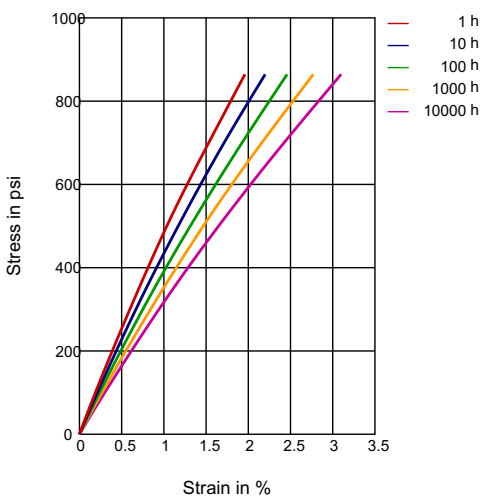
STRESS-STRAIN



SECANT MODULUS-STRAIN



STRESS-STRAIN (ISOCHRONOUS) 73°F



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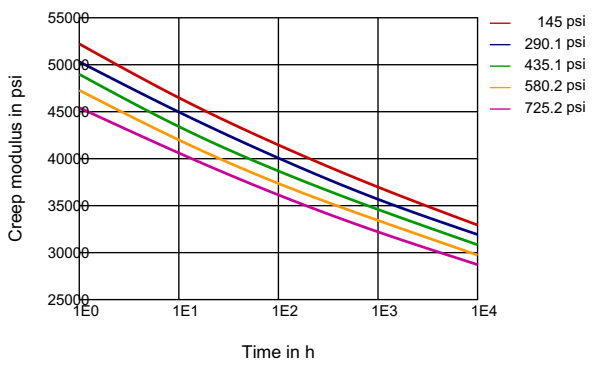
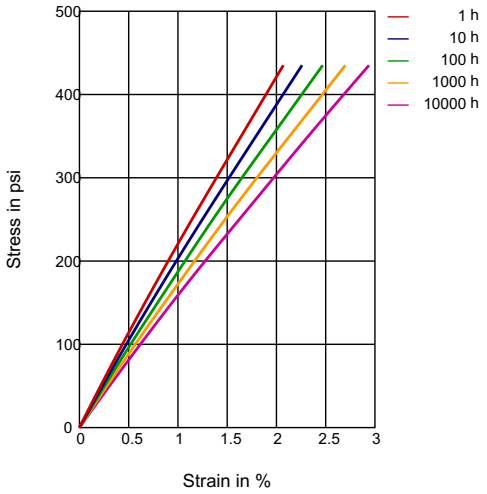
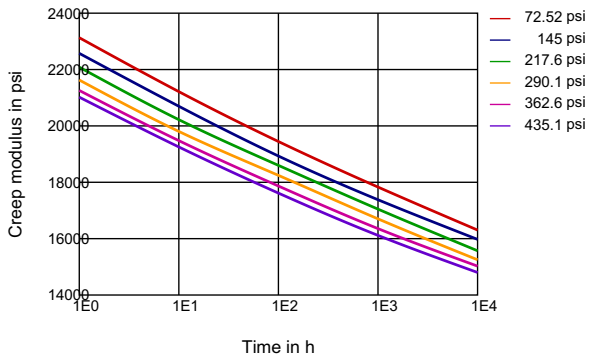
CREEP MODULUS-TIME 73°F



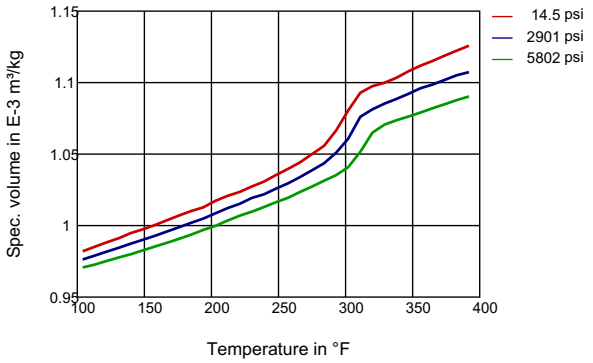
STRESS-STRAIN (ISOCHRONOUS) 176°F



CREEP MODULUS-TIME 176°F



SPECIFIC VOLUME-TEMPERATURE (PVT)



Processing conditions, Extrusion :

- Typical melt temperature (Min / Recommended / Max) : 210°C / 230°C / 260°C.
- Drying time and temperature (only necessary for bags opened for more than two hours) : 4-8 hours at 80°C.

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PROCESSING

Injection Molding, Profile Extrusion, Other Extrusion

DELIVERY FORM

Pellets

ADDITIVES

Lubricants, Plasticizer

SPECIAL CHARACTERISTICS

Heat Stabilized, Light Stabilized

REGIONAL AVAILABILITY

North America, Europe, Asia Pacific, South and Central America, Near East/Africa

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