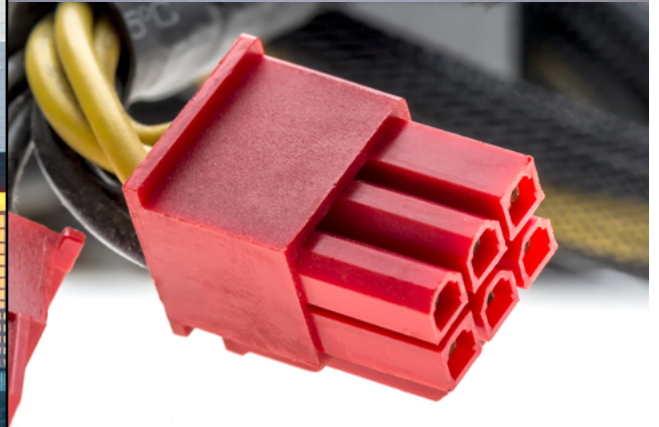
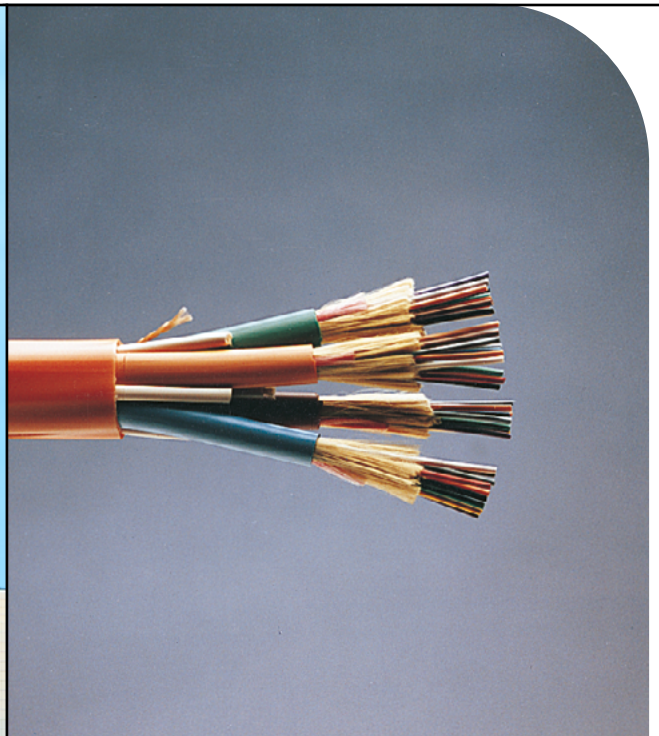
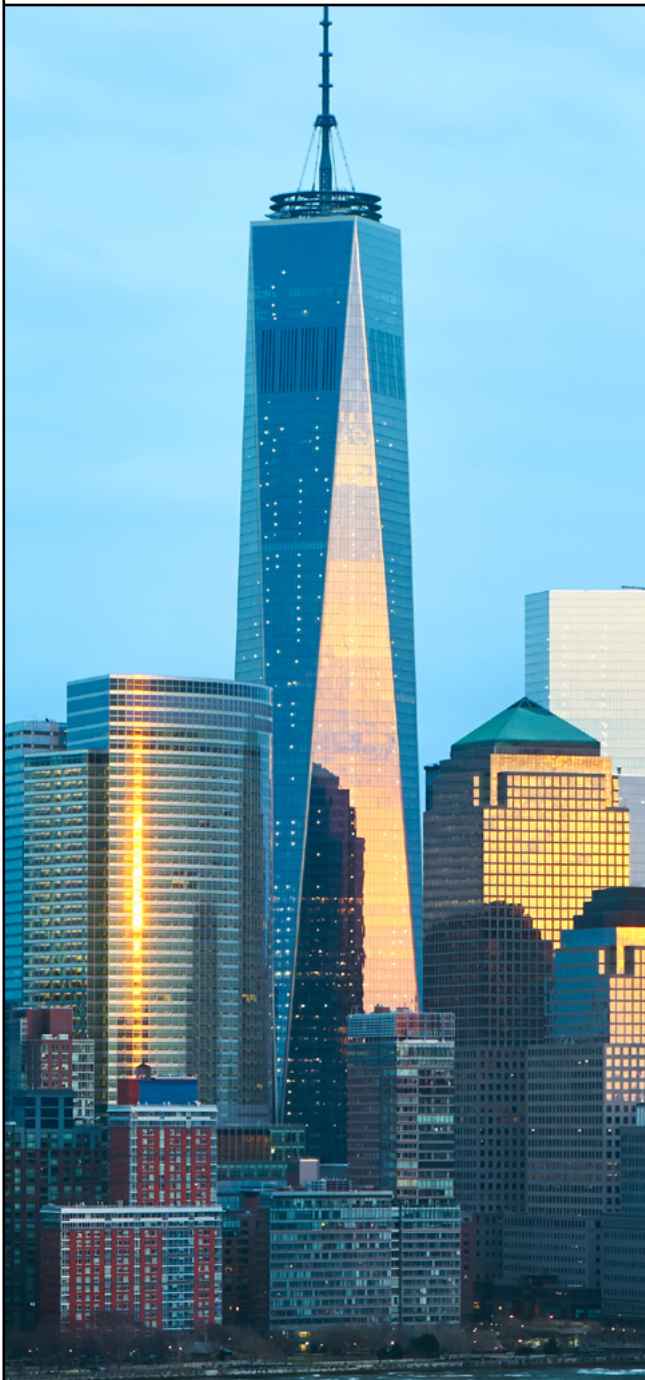




HIGH PERFORMANCE POLYMERS **THERMOPLASTIC RESINS** FOR THE WIRE & CABLE MARKETS





INNOVATION



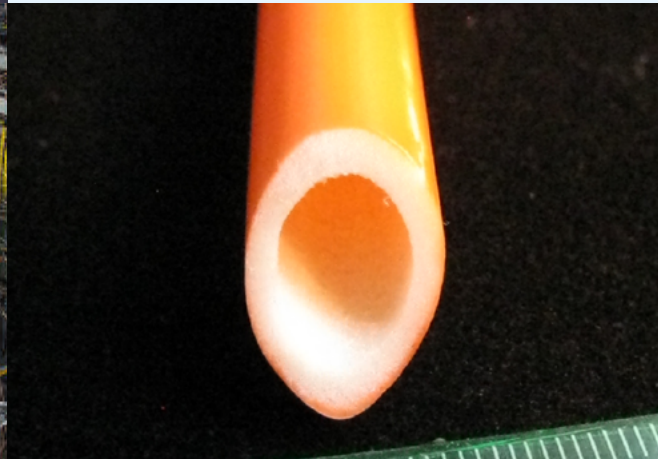
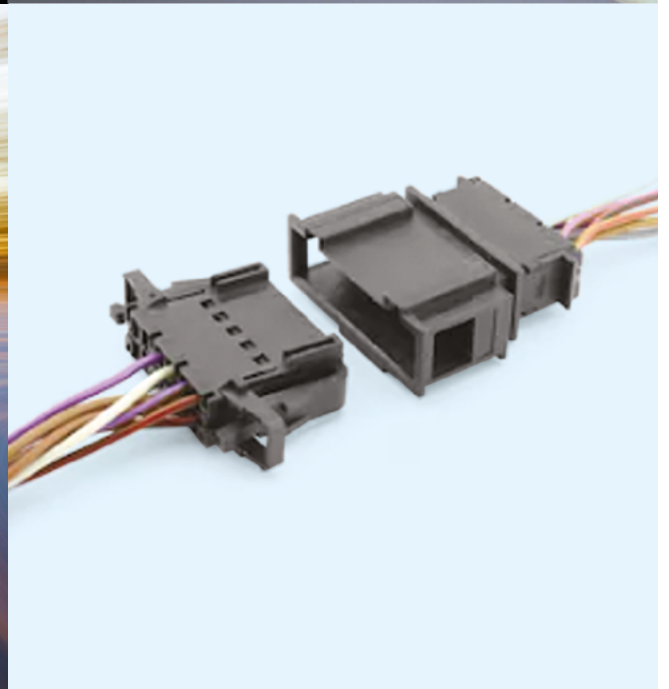
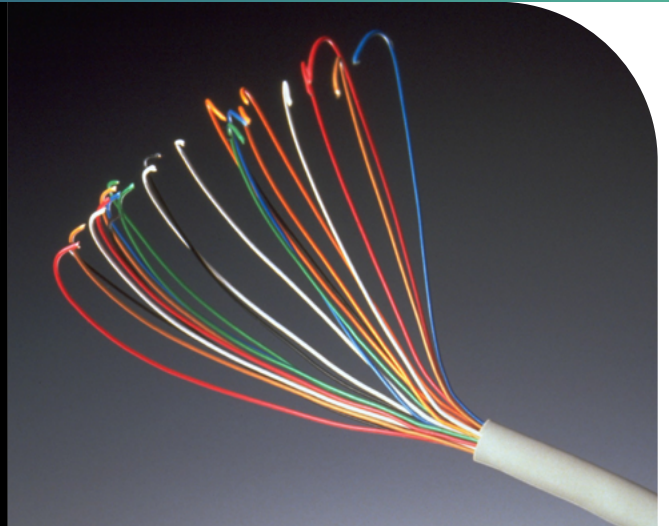
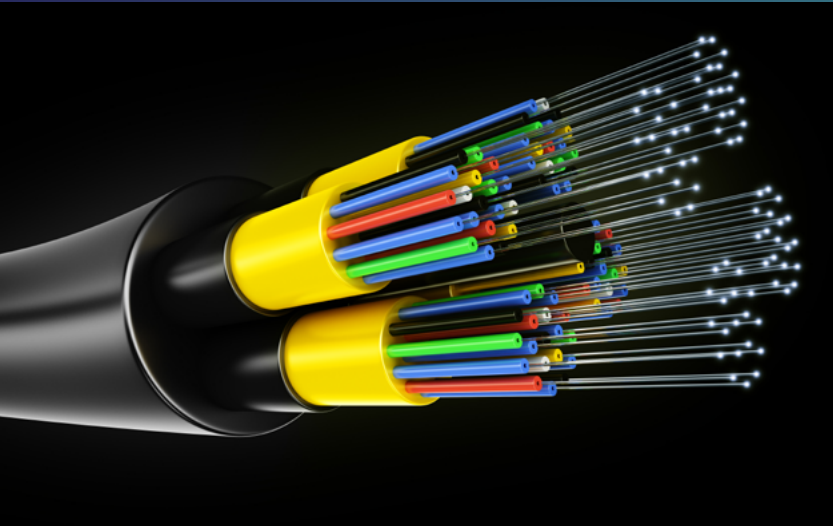
SUSTAINABILITY



EXTREME
WEATHERABILITY



DURABILITY



AN EXTREME WORLD NEEDS EXTREME PROTECTION

KYNAR®

PVDF AND PVDF COPOLYMERS

- Fluoropolymer resins
- Chemical resistance
- Flame and smoke resistance
- Durability
- Ease of processing

RILSAN®

LONG CHAIN POLYAMIDES

- High performance polyamide resins
- Toughness
- Flexibility
- Chemical resistance
- Low moisture absorption

PEBAX®

POLYETHER BLOCK AMIDES

- Thermoplastic elastomers (TPE)
- Lightweight
- High energy return (low hysteresis)
- Low temperature performance

ORGALLOY®

POLYAMIDE ALLOYS

- Low moisture absorption
- Lightweight
- High performance to cost ratio

KEPSTAN®

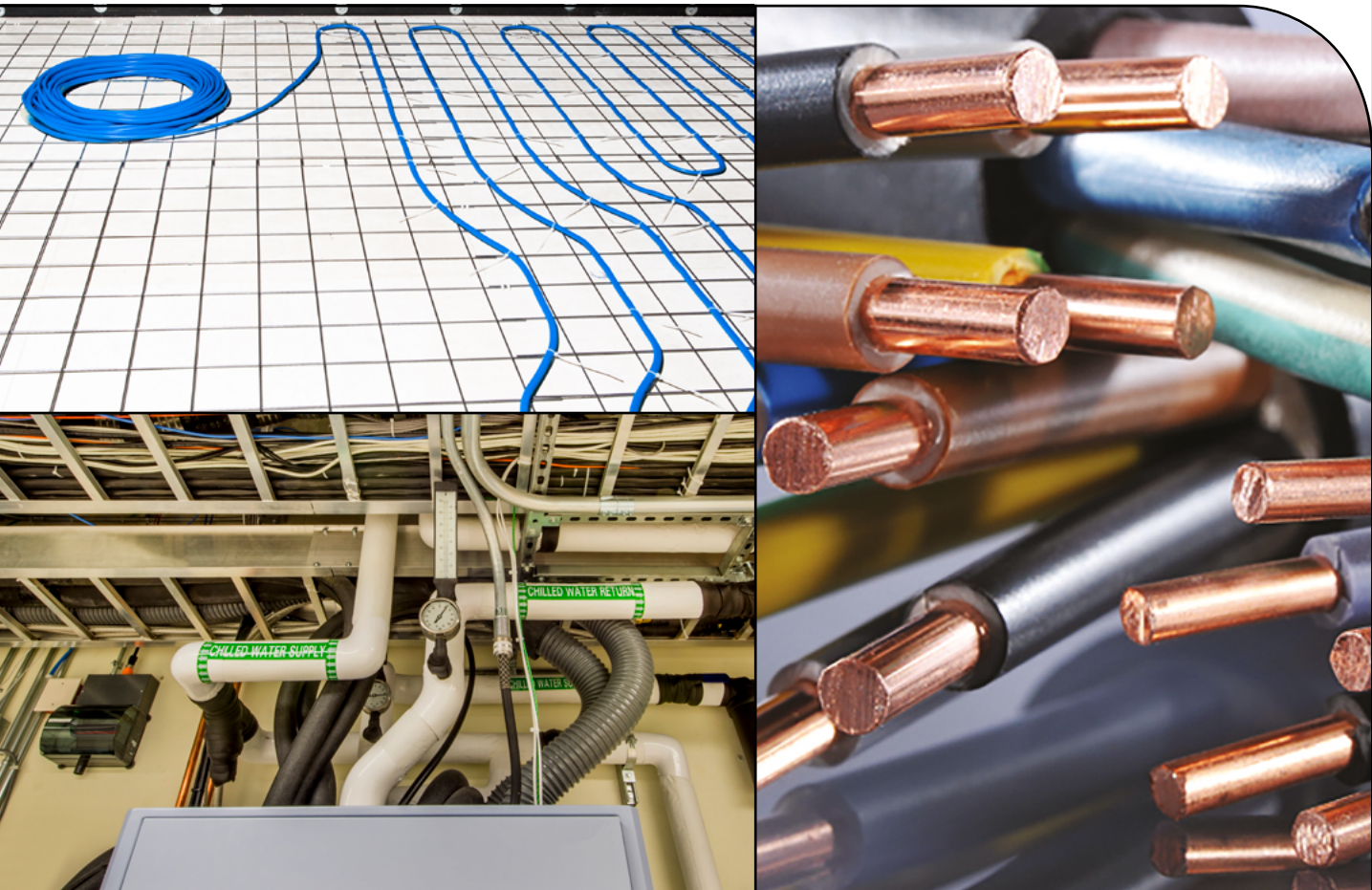
POLYETHER KETONE (PEKK)

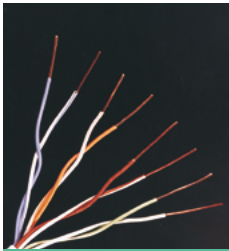
- Extreme Thermal stability
- Chemical resistance
- Mechanical strength
- Low flame and smoke toxicity
- Excellent wear properties

KYNAR® KYNAR FLEX®

Cable jackets needing a plenum rating to 150°C, flexibility, cold temperature ductility, low shrinkage and chemical/UV/radiation resistance are made with Kynar® PVDF resin.

PROPERTY	VALUE
DENSITY	1.78 g/cm³
UL RATING	Yes
MELTING POINT	100 - 150°C
DIELECTRIC STRENGTH	0.8 - 1.6kV/mil
FLEX MODULUS	36 - 335 Kpsi
GLASS TRANSITION TEMPERATURE	-40°C
SHRINKAGE RATE	0.4 - 1%
FLAMMABILITY RATING (UL 94)	V - 0
LIMITING OXYGEN INDEX	36 - 95%





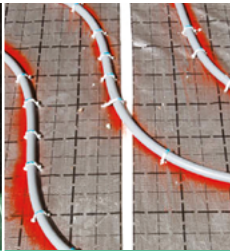
**DATA/LAN
TELCOM**



**PLENUM
CABLE**



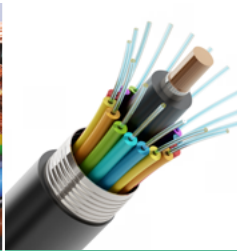
**MICRO-
PRODUCTS**



**HEATING
CABLE**



**COPPER
CABLE**



**FIBER
CABLE**



**SHRINKABLE
TUBING**



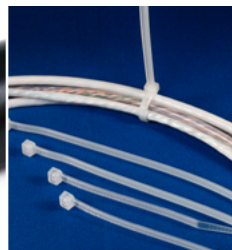
**INDOOR/
OUTDOOR
FO CABLES**



**CATHODIC
PROTECTION**



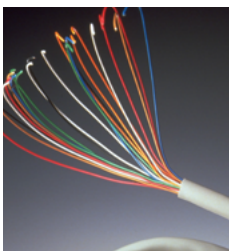
**CONVOLUTED
TUBING AND
CONDUITS**



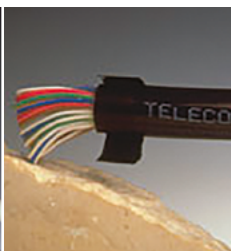
CABLE TIES



**MARINE
CABLE**



**FURCATION/
BUFFER
TUBING**



**ANTI-TERMITE
SHEATHING**



**CABLE
CONNECTORS**



**AUTOMOTIVE
CABLE**



**MILITARY AND
DEFENSE
CABLE**

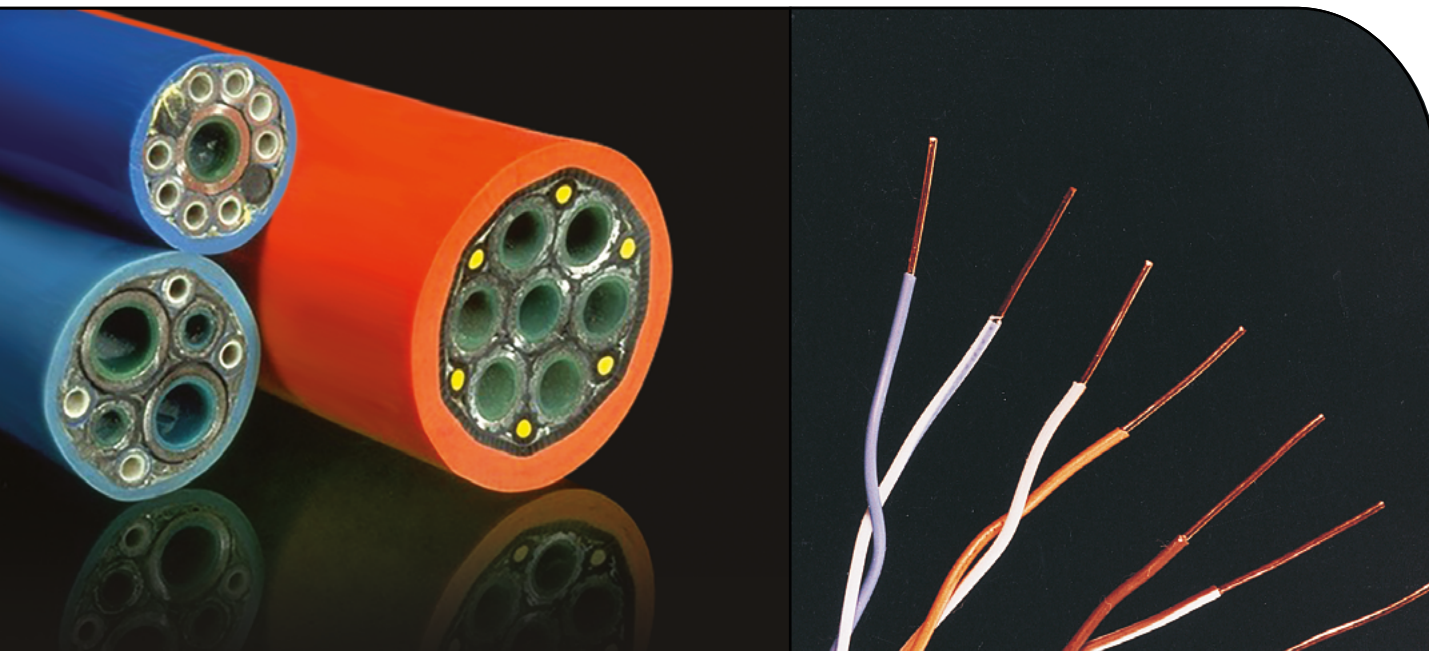


**DOWN HOLE
AND MINING
CABLES**

RILSAN®

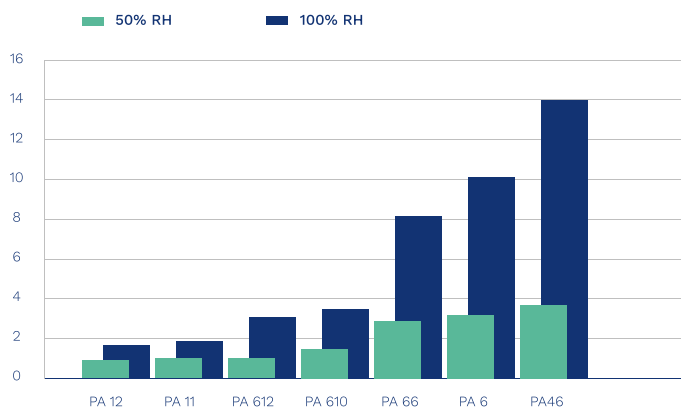
Rilsan® PA11 resin is a tough yet light weight bio-based resin frequently used as a cable jacket or cladding. It has good chemical, abrasion, impact, and temperature resistance. Moisture absorption is very low.

PROPERTY	VALUE
DENSITY	1.03 g/cm ³
UL RATING	Yes
MELTING POINT	180 - 190°C
DIELECTRIC STRENGTH	580 kV/mil
FLEX MODULUS	157 Kpsi
GLASS TRANSITION TEMPERATURE	46°C
SHRINKAGE RATE	0.4% 0.8% ⊥



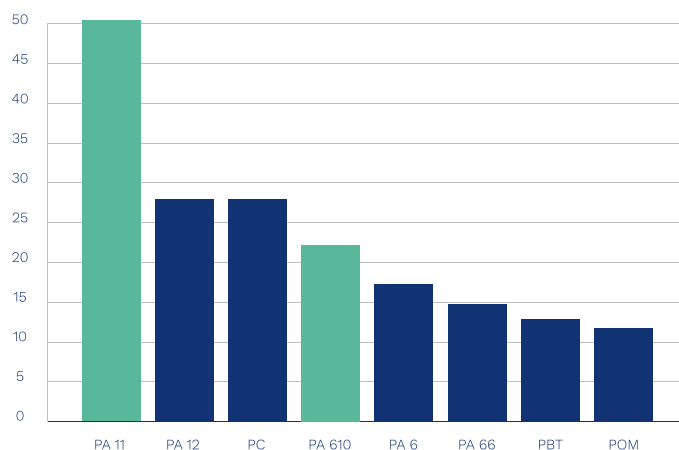
**AN EXTREME WORLD NEEDS
EXTREME PROTECTION**

% Moisture Absorption at 23°C



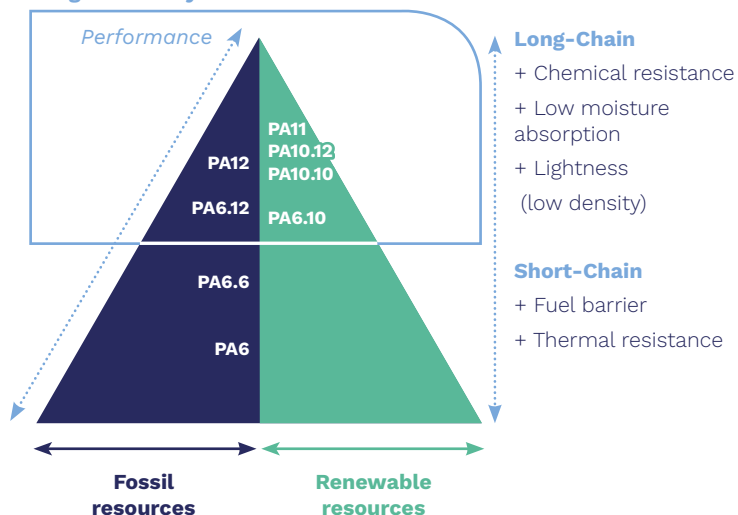
Improved dimensional stability

Impact Strength (KJ/m²)



Better impact resistance

Long Chain Polyamides



		PA11	PA12
SPECIFIC GRAVITY	Density	1.03	1.01
TEMPERATURE INDEX	3000h	125	100
LOW TEMPERATURE	Cold Wind Test	-40°C	-40°C
ELONGATION	%	<300	<300
IMPACT STRENGTH	(kJ/M³)	50	27
FLEX MODULUS	MPa	320 -1,100	320 -1,100
PROCESSABILITY	Processability	Good	Good
HARDNESS	Shore D	Various	Various

RESISTANCE TO	PA11	PA12
OIL	++	++
FUEL	++	++
ACIDS	+	+
ABRASION	++	++



INNOVATION



SUSTAINABILITY



EXTREME
WEATHERABILITY



DURABILITY

ORGALLOY®

Orgalloy® polyamide alloys combine the important physical and chemical properties of short-chain polyamides with the economic and process advantages of polyolefins. They are designed to offer improved dimensional stability, lower density, and better mechanical properties than PA 6 and PA 66 resins. Orgalloy has low moisture uptake and high chemical resistance and barrier properties.

Orgalloy® resin has the combined properties of both of these materials:

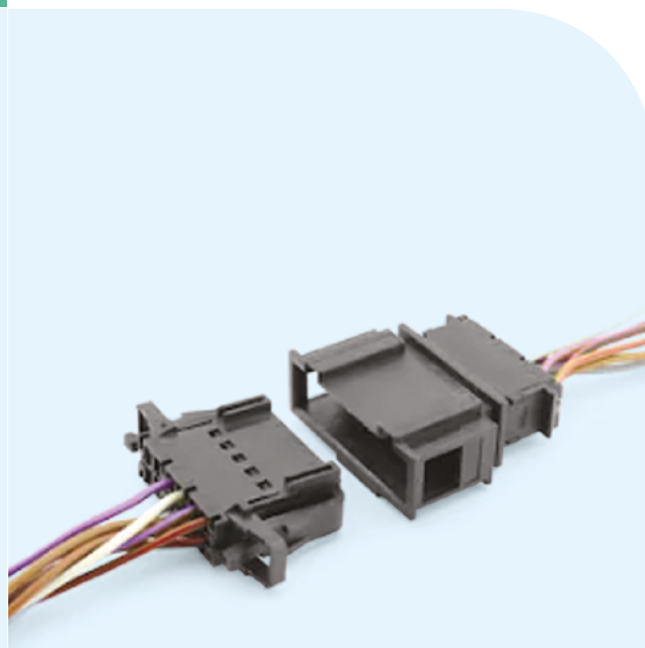
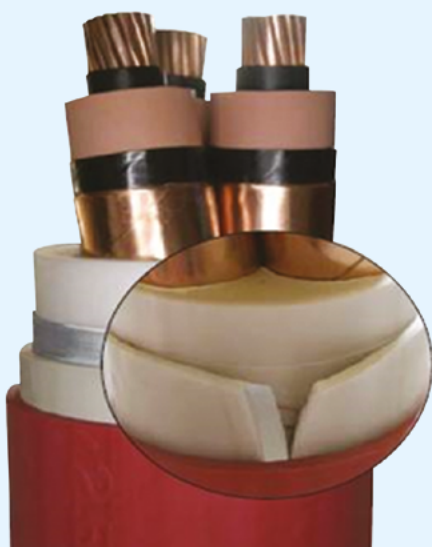
Polyolefin

- Easy processing
- No moisture uptake
- Inert to polar solvents
- Impact resistant

Polyamide 6 or 6.6

- Mechanical strength
- Thermal resistance
- Chemical resistance to HCs
- Barrier to HCs

PROPERTY	VALUE
DENSITY	1.03 g/cm ³
UL RATING	Yes
MELTING POINT	180 - 190°C
DIELECTRIC STRENGTH	580 kV/mil
FLEX MODULUS	157 Kpsi
GLASS TRANSITION TEMPERATURE	46°C
SHRINKAGE RATE	0.4% 0.8% ⊥

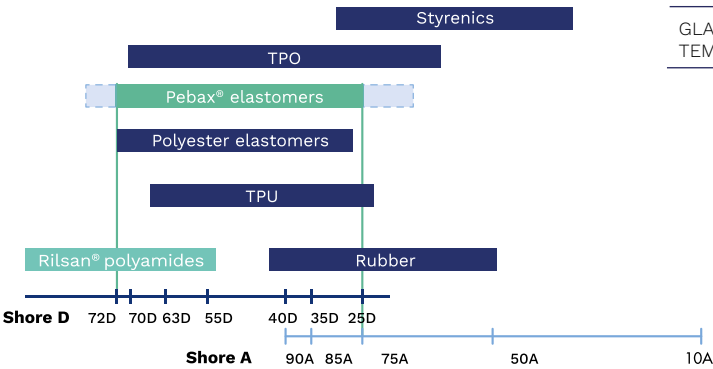


**AN EXTREME WORLD NEEDS
EXTREME PROTECTION**

PEBAX®

Pebax® elastomers are lightweight, flexible, and tough – making them a great alternative to TPUs and co-polyesters (COPE).

SOFT AND FLEXIBLE TO HARD AND RIGID



PROPERTY	VALUE
DENSITY	1.01 g/cm³
MELTING POINT	144 - 174°C
DIELECTRIC STRENGTH	1,080 kV/in
FLEX MODULUS	2 – 74 Kpsi
GLASS TRANSITION TEMPERATURE	-65°C



INNOVATION



SUSTAINABILITY



EXTREME
WEATHERABILITY



DURABILITY

The high temperature resin for your cable designs.

KEY PROPERTIES

- Ultra-high performance polymer series (**PEKK**) with **tunable** crystallization profiles
- Excellent **chemical** resistance
- Superior **flame and smoke** properties
- Outstanding **electrical** properties
- **Glass and carbon filled** grades for the best tensile and compressive strength

VERSATILE PROCESSING

- Selective laser sintering
- Fused filament fabrication
- Injection molding
- Extrusion
- Thermoforming
- Composite tape
- Rotomolding

PROPERTY	VALUE
DENSITY	1.29 g/cm ³
MELTING POINT	305 - 360°C
DIELECTRIC STRENGTH	2,133 kV/in
FLEX MODULUS	550 Kpsi
GLASS TRANSITION TEMPERATURE	160-165°C
SHRINKAGE RATE	23 um/m/k

PEKK VS. PEEK

- Wider product range/ processing technologies
- Higher **T_g** and **T_m**
- Improved barrier properties
- Improved **dry wear** properties
- Better **coefficient of friction** control



High Performance Polymers Products/Applications

KYNAR®	RILSAN®	KYNAR® or RILSAN®	KEPSTAN®
<ul style="list-style-type: none"> → FLAME/ SMOKE/ CHEMICAL RESISTANCE → HEAT SHRINKABLE TUBING → CATHODIC PROTECTION → PLENUM CABLES → MILITARY & DEFENSE CABLE 	<ul style="list-style-type: none"> → ABRASION → LOW DENSITY → ANTI-TERMITE SHEATHING → MECHANICAL CONTROL CABLES → POWER CABLES 	<ul style="list-style-type: none"> → OIL RESISTANCE → UV RESISTANCE → CABLE TIES → CONVOLUTED TUBING & CONDUITS → DOWN-HOLE & MINING CABLES 	<ul style="list-style-type: none"> → HIGH TEMPERATURE APPLICATIONS UP TO 260°C → ANTI-TERMITE SHEATHING → MECHANICAL CONTROL CABLES → POWER CABLES

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