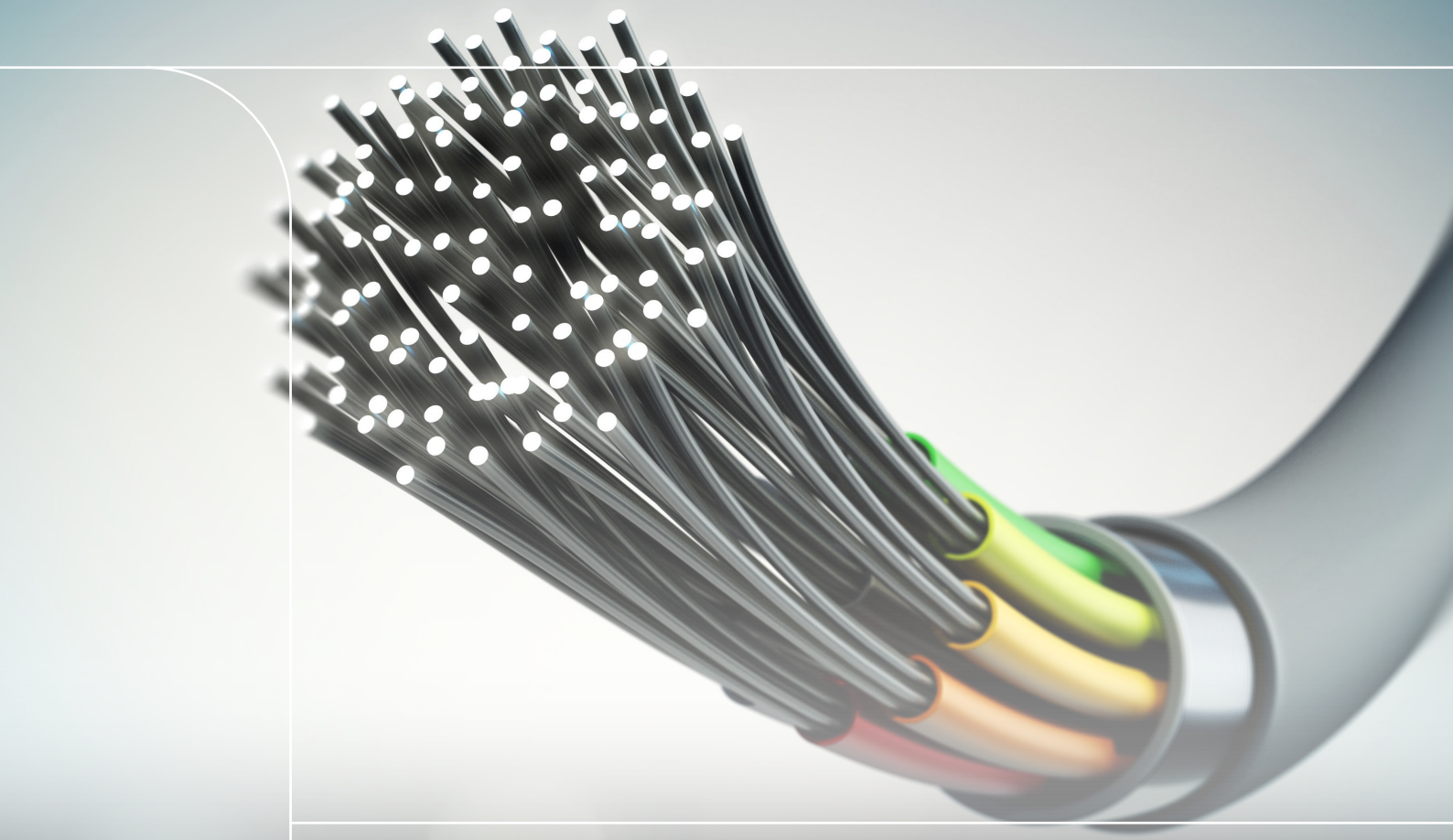
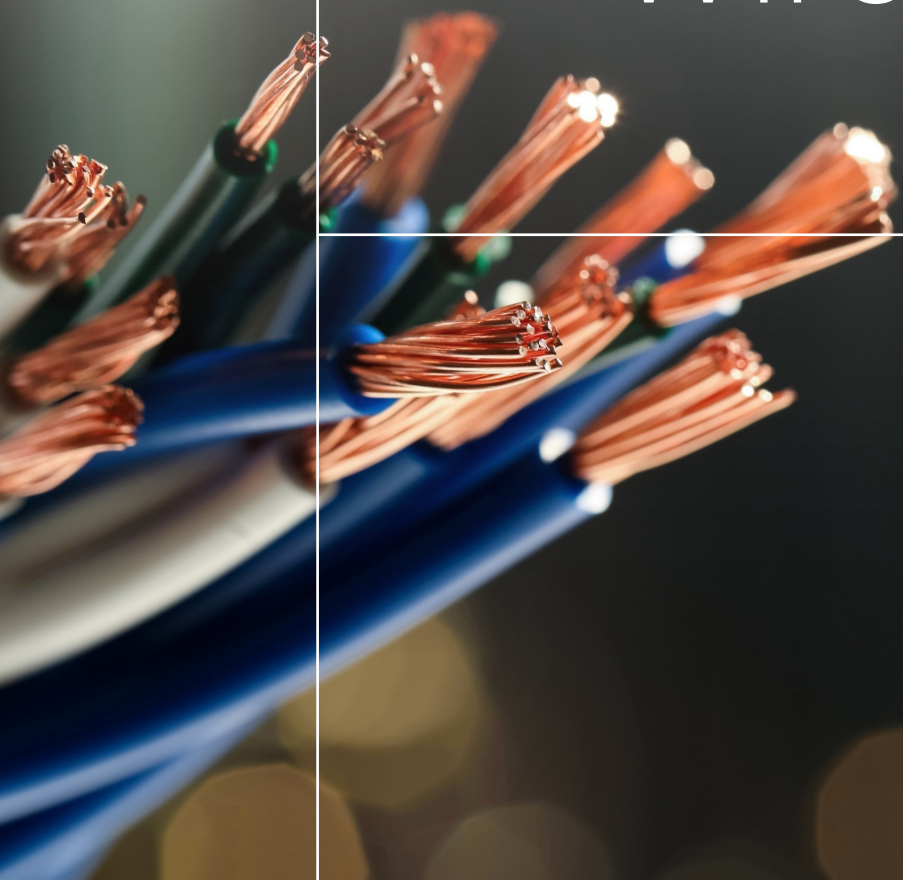
ARKEMA



HIGH PERFORMANCE POLYMERS FOR THE

Wire & Cable Industry



Overview

Electrifying the market by providing innovative solutions

Arkema's range of fluoropolymer and specialty polyamide jacketing materials is essential in the cable markets. These resins are available in pellets or powder and can be tailored to the needs of your cable designs.

KYNAR® PVDF AND KYNAR FLEX® PVDF COPOLYMERS

- → High chemical resistance
- → Wide range of flexibilities
- → Flame & smoke resistance
- → Durability
- → Ease of processing
- → Wide temperature resistance

RILSAMID® POLYAMIDE 12

- → Oil & Gas Resistance
- → Abrasion Resistance
- → High Flexibility
- → Anti-termite resistance

RILSAN® POLYAMIDE 11

- → Bio-based from castor beans
- → Wide range of flexibilities
- → High-impact, low moisture absorption

ORGALLOY® POLYAMIDE ALLOYS

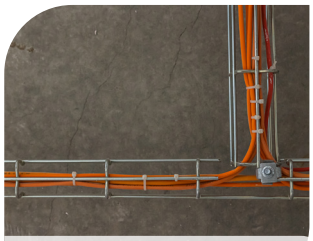
- → Low moisture absorption
- → Lightweight
- → High performance to cost ratio

Applications

With decades of testing and proven history, our materials comply with numerous industry standards, allowing them to be utilized in many applications.

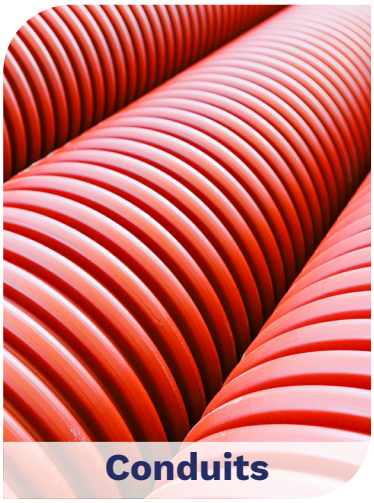
Data Center Cables

Furcation & Buffer Tubing



Plenum Cables

Oil & Gas Cables

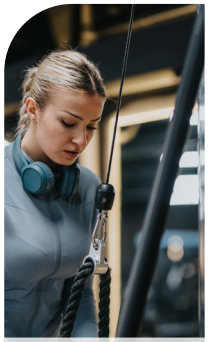


Conduits

Anti-Termite Cables

Copper Cables

Heat Shrink Tubing



Exercise/ Control Cables

Fiber Optic Cables

Automotive Cables

Mining Cables

Cathodic Protection Cables

Fire Alarm Cables

Kynar® PVDF & Kynar Flex® PVDF

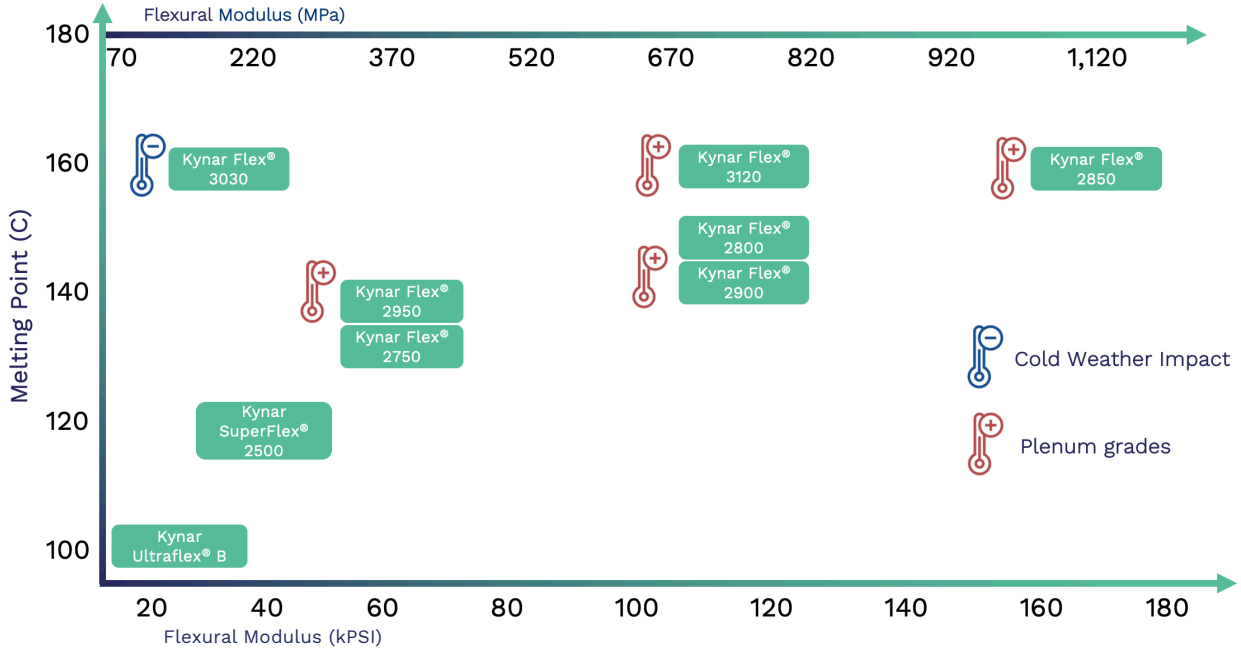
Kynar® PVDF resins offer **high-performance properties** designed for wire and cable applications. These materials, which are **made without the use of fluorinated surfactants** have been service the cable industry for decades.

Key Properties:

- → Flame & Smoke Resistance
- → Chemical Resistance
- → Flexibility
- → Cold Temperature Impact, down to -40° C
- → High temperature resistance, up to 150° C
- → UV resistance
- → Crosslinking ability

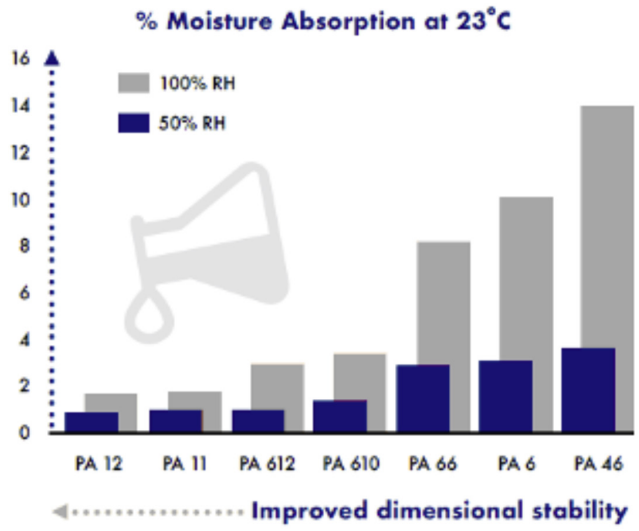
Arkema offers a wide range of Kynar® PVDF solutions, which provide engineers many options for their cable designs. Furthermore, Kynar® PVDF grades may be blended or mixed in different ratios to form unique compositions.

PROPERTY	VALUE
Density	1.78 g/cm^3
UL Rating	Yes
Melting Point	100 - 150° C
Dielectric Strength	0.8 - 1.6 kV/mil
Flexural Modulus	36 - 335 Kpsi
Glass Transition	-40° C
Shrinkage	0.4 - 1.0%
Flamability Rating (UL 94)	V - 0
Limiting Oxygen Index	36 - 95



Rilsamid® PA12 and Rilsan® PA11 Specialty Polyamides

Long chain specialty polyamides, PA12 and PA11, are tough yet lightweight. Both materials provide the **abrasion resistance** performance needed in demanding applications, like anti-termite cables.



PROPERTY	METHOD/UNIT	PA 11	PA 12
Density	g/cm^3	1.03	1.01
Dielectric Strength	kV/mm at 50 Hz for 1 mm thick	30	30
Low Temperature	Cold Wind Test	-60° C	-40° C
Nominal strain at break	%	>50	>50
Impact Strength at 23°C	Charpy Unnotched test	No Break	No Break
Oil Resistance	-	++	++
Fuel Resistance	-	++	++
Acid Resistance	-	+	+
Flexural Modulus	MPa	350-1300	420-1250

Orgalloy® PE/PA Alloys

Cables needing toughness, **with lower cost in mind**, may utilize Orgalloy® PE/PA alloys. Consider Orgalloy® PE/PA alloys if a tougher version of PA6 or PA6.6 is needed.

PROPERTY	VALUE
Density	1.04 g/cm^3
Melting Point	220° C
Dielectric Strength (1 mm thick)	38 kV/mm
Flexural Modulus	1200 - 1600 MPa
Tensile Strength at Break	30 - 45 MPa
Nominal Strength at Break	>50%

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