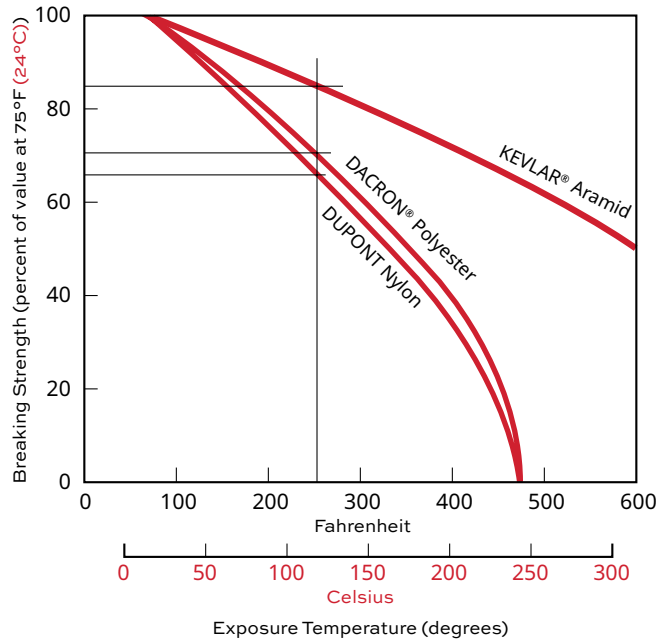


A COMPARISON of TIRE CORD and ELASTOMERIC MATERIALS USED in SPHERICAL and OTHER STYLE EXPANSION JOINTS

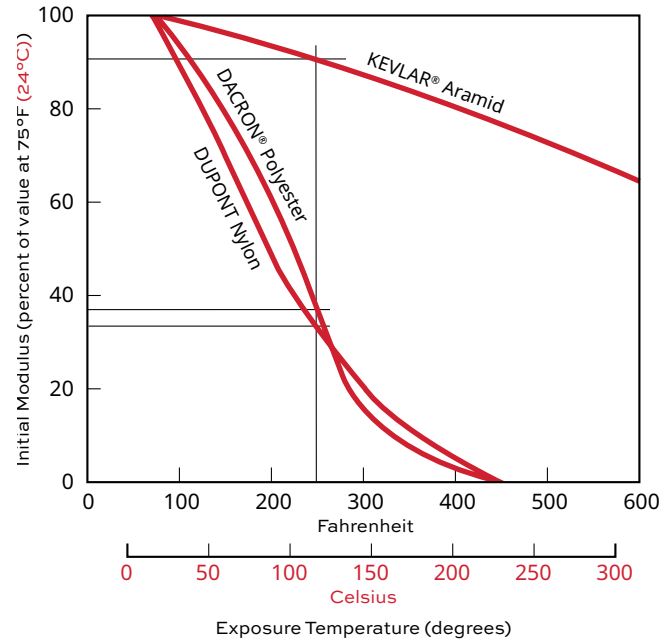
Dupont™ Industrial Yarns

NOTE: At 250°F, there is no significant change in Kevlar® Breaking Strength, Table 1; Modulus, Table 2; or Aging Properties, Table 3c.

1. Strength of Typical DuPont Industrial Yarns at Elevated Temperatures

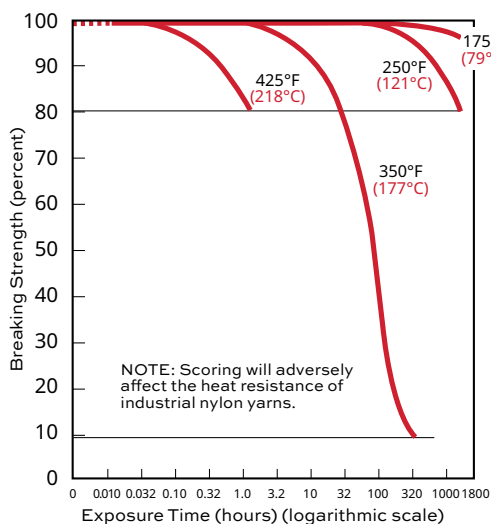


2. Initial Modulus of Typical DuPont Industrial Yarns at Elevated Temperatures

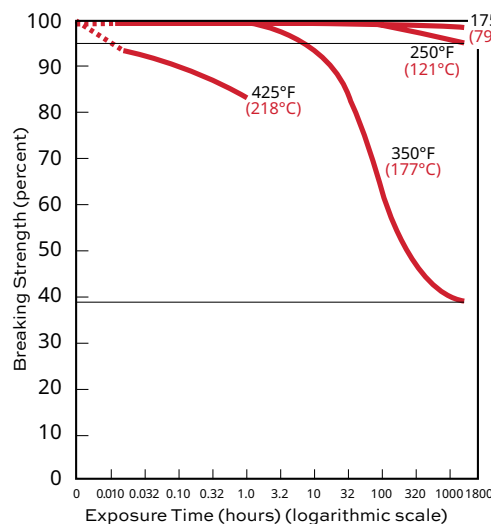


3. Breaking Strength Retained by Unscoured Yarns After Exposure to Hot, Dry Air

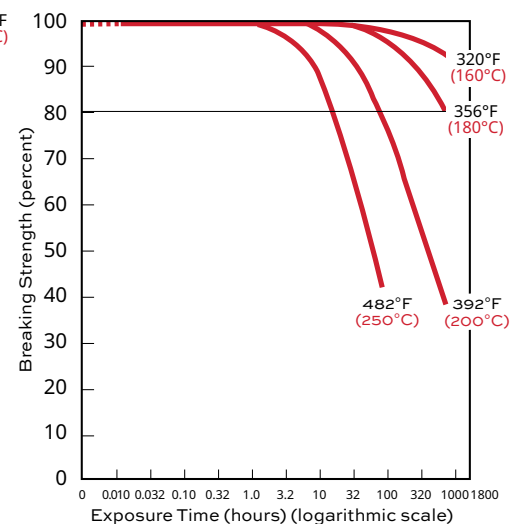
3a. DUPONT NYLON



3b. DACRON® POLYESTER



3c. KEVLAR® ARAMID



Breaking Strengths at 70°F (21°C), 65% R.H. before and after exposure.

ELASTOMERS

	Natural Rubber	EPDM	Neoprene®	Hypalon®	ChloroButyl	Nitrile
Tensile Strength Carbon Black Reinforcement	Over 3000 psi (2122 kg/cm ²)	Over 3000 psi (2122 kg/cm ²)	Over 3000 psi (2122 kg/cm ²)	Over 3000 psi (2122 kg/cm ²)	Over 2500 psi (1768 kg/cm ²)	Over 2000 psi (1415 kg/cm ²)
Adhesion to Metals	Excellent	Good to Excellent	Excellent	Excellent	Good	Excellent
Adhesion to Fabric	Excellent	Good	Excellent	Good	Good	Good
Tear Resistance	Good	Good	Good	Fair	Good	Good
Abrasion Resistance	Excellent	Excellent	Excellent	Excellent	Fair	Good
Permeability to Gases	Fair	Fair	Low	Low to Very Low	Good	Fair
Acid Resistance Diluted	Fair to Good	Excellent	Excellent	Excellent	Good	Good
Concentrated	Fair to Good	Excellent	Good	Very Good	Fair	Fair
Resistance to: Swelling in Lubricating Oil	Poor	Poor	Good	Very Good	Poor	Excellent
Gasoline	Poor	Poor	Good	Good	Poor	Excellent
Animal and Vegetable Oils	Fair	Good	Good	Good	Good	Excellent
Water Absorption	Very Good	Very Good	Good	Very Good	Very Good	Good
Oxidation	Good	Excellent	Excellent	Excellent	Excellent	Good
Ozone	Fair	Outstanding	Excellent	Outstanding	Excellent	Fair
Sunlight Aging	Poor	Outstanding	Very Good	Outstanding	Excellent	Poor
Heat Aging	Fair	Excellent	Good	Excellent	Excellent	Good
Temp. Ratings Continuous Service *Hot	180°F (82°C)	250°F (121°C)	200°F (93°C)	250°F (121°C)	250°F (121°C)	220°F (104°C)
*Cold	-10°F (-23°C)	-60°F (-51°C)	-10°F (-23°C)	-10°F (-23°C)	-10°F (-23°C)	10°F (-12°C)

*Special compounds may exceed these ratings.