Fibre Characteristics

DONAGHYS
PERFORMANCE FIRST

DESCRIPTION	FIBRE TYPE	SPECIFIC GRAVITY	SENSITIVE TO	RESISTANT TO	HEAT REACTION	STRENGTH AND ELONGATION
HT Polyester	Continuous Filament	1.38	Alkalis, phenolic compounds, sulphuric acid.	Most organic and mineral acids, organic solvents, bleaches and oxidising agents.	Softens 228°C Melts 255°C	Equivalent wet/dry strength ratio. Elongation 35% at break.
Polyamide (Nylon 6.6)	Continuous Filament	1.14	Strong acids and oxidising agents, soluble in formic, sulphuric acids and phenolic compounds.	Alkalis, alcohols, esters, hydrocarbons and most bleaches.	Softens 229°C. Melts 249°C – 260°C	Elongation Dry 40%. Wet 35%. 90-95% strength ratio wet/dry.
Aramid (Kevlar®)	Continuous Filament	1.44	Hydochloric, hydrobromic and sulphuric acids, bleaching and sunlight. Highly sensitive to abrasion.	Mineral and organic acids, alkalis, organic solvents, mildew and fungi.	371°C decomposition	Equivalent wet/dry strength ratio. Elongation 4% at break.
Technora®	Spun Filament	1.39	Hydochloric, hydrobromic and sulphuric acids, bleaching and sunlight.	Mineral and organic acids, alkalis, organic solvents, sea water and steam.	500°C+ decomposition	Equivalent wet/dry strength ratio. Elongation 4.5% at break.
UHMwPE Ultra High Molecular weight Polyethylene	Continuous Filament	0.97	Strong oxidising agents, chlorosulfonic and nitric acids at high temperatures.	Most acids and alkalis, cold alcohols, ethers, esters, ketones and bleaches.	Melts 152°C	Equivalent wet/dry strength ratio. Elongation 2-5% at break.
TLCP (Vectran® UM) Thermotropic liquid crystal fiber	Continuous Filament	1.37	Alkalis at high temperatures.	Acids, alkalis.	400°C decomposition	Elongation 2.4% @ BF 98% strength ratio wet/ dry. 22 g/d.
PBO (Zylon®)	Continuous Filament	1.56	Strong acids, acids and alkalis at higher temperatures, sunlight.	Organic solvents, acids and alkalis at room temperature.	650°C decomposition	2.5% at break.