James Walker

Unilion® seal jacket materials

Material name and description	Jacket material code	Colour	Applications	Temperature range – continuous use (°C)
Fluolion® 01 Virgin PTFE	01	White	Excellent for light dynamic and static service. Low gas permeability. Good cryogenic properties. Conforms to FDA 21 CFR 177.1550.	-250 to +260
Fluolion® 02 PTFE/inorganic filler	02	Blue	Similar properties to Fluolion® 01, but with improved wear resistance.	-260 to +260
Fluolion® 03 PTFE/carbon/graphite	03	Black	Excellent material for heat and wear resistance. Recommended for dry and poorly lubricated applications. Suitable for duties in water and steam.	-250 to +260
Fluolion® 05 PTFE/carbon/graphite	05	Black	Similar to Fluolion® 03, but offers superior wear resistance. Excellent in steam and water under severe conditions. Very good extrusion resistance at high temperature. Excellent for back-up rings.	-250 to +260
Fluolion® 06 PTFE/carbon/MoS_2	06	Black	Excellent for extreme dynamic conditions, with combinations of high temperature, pressure, speed, and dry running. Excellent in water and water-based solutions. Abrasive when running against soft metal counterfaces.	-250 to +260
Fluolion® 07 PTFE/bronze	07	Brown	Excellent in reciprocating hydraulic applications: not recommended for rotary use. Good for high pressure applications. Good abrasion resistance.	-150 to +260
Fluolion® 08 PTFE/polymer	08	Light brown	Special grade for high temperature applications. Recommended for low to medium speed applications running against soft metals.	-240 to +260
Fluolion® 09 PTFE/aromatic polyester	09	Brown	Special grade with superior heat and wear resistant characteristics. Non-abrasive; recommended for low to high speed applications running against soft metals. Not recommended for use in water.	-250 to +260
UHMWPE	10	White	Excellent low-wearing material, being highly abrasive resistant. This sturdy material offers limited heat and chemical resistance.	-250 to +80
Fluolion® 11 PTFE/glass/MoS_2	11	Grey	Ideal for improved sealing at lower pressures. Can be abrasive when running against soft metal counterfaces.	-250 to +260
Fluolion® 12 PTFE/graphite	12	Black	General purpose grade with good heat and wear resistance. Good in water and non-lubricating fluids; compatible with all common hydraulic fluids and most chemicals.	-250 to +260

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PEEK	13	Light brown	A high modulus material with excellent high temperature resistance. Used for anti-extrusion and other support rings.	-70 to +260
Fluolion® 15 PTFE/inorganic filler	15	White	Food-compatible filled PTFE. Typically used for bearing/ support ring duties.	-250 to +260
Fluolion® 18 PTFE/glass filler	18	Off-white	Higher modulus material ideal for anti-extrusion support rings. Can be abrasive when running against soft metal counterfaces.	-250 to +260
Fluolion® 22 Modified PTFE	22	White	Excellent for static and intermittent dynamic applications. Particularly good at cryogenic applications. Conforms to FDA requirements.	-260 to +260
Fluolion® 22C Modified PTFE/25% carbon	22C	Black	Similar to Fluolion® 22, but offers increased wear resistance. Excellent for extreme dynamic applications with combinations of high temperature, pressure, speed, and dry running.	-260 to +260
PCTFE	28	Colourless	High mechanical strength, chemical resistance and low shrinkage rate at low temperatures makes this material ideal for cryogenic applications.	-250 to +160
POM	30	White	The combination of high strength and low coefficient of friction results in POM being perfectly suited as a material for bearings, bushes and guide bands.	-50 to +100

Other material compounds are available on request to meet specific applications, for example Norsok M-710 approved grades.