



TPU JACKET MATERIAL

O'Brien's TPU jacket material is a polyether-based thermoplastic urethane containing a plasticizer. It contains a non-halogenated flame retardant and has a "V-0" rating in accordance with the UL-94 vertical flame test (at thickness of 0.9 mm and less). It exhibits excellent abrasion resistance, toughness, low temperature properties, hydrolytic stability and fungus resistance.

Properties		Test Method	Typical Value	
			English	SI
Physical				
Specific Gravity	gr./cm ³	ASTM D-792	1.14	1.14
Hardness	Shore A	ASTM D-2240	75A	75A
Flame Rating		UL-94	V-0 – 0.036" V-2 - 0.060"	V-0 – 0.9mm V-2 - 1.5mm
LOI	%	ASTM D-2863	23%	23%
Mechanical				
Tensile Strength (Ultimate)	psi / MPa	ASTM D-412	6000 psi	41 MPa
Tensile Stress@100% Elong.		ASTM D-412	700 psi	4.8 MPa
Tensile Stress @300% Elong.		ASTM D-412	1550 psi	11 MPa
Elongation at Break	%	ASTM D-412	685%	685%
Tensile Set	%	ASTM D-412	51%	51%
Compression Set, %	22 hrs @ 23°C	ASTM D-395 (B)	20%	20%
Compression Set, %	22 hrs @ 70°C	ASTM D-395 (B)	45%	45%
Flexural Modulus	psi / MPa	ASTM D-790	3600 psi	25 MPa
Tear Strength	lb./in. N/mm	ASTM D-624, Die	325 lb./in.	57 N/mm
Taber Abrasion (mg loss)	1000 gr./H-18	ASTM D-1044	20 mg	20 mg
DIN Abrasion (mm ³ loss)		DIN 53516	45 mm ³	45 mm ³
Thermal				
Minimum Installation Temperature	°F/°C		-40 °F	-40°C
Minimum Service Temperature	°F/°C		-67°F	-58°C
Maximum Installation Temperature	°F/°C		140°F	60°C
Maximum Service Temperature	°F/°C		250°F	120°C

The above values are shown as typical values and should not be used as specifications.
Molded plaques 0.080" thick were cured 20 hours at 100 °C before testing