FEDERAL SUPPLY CLASS
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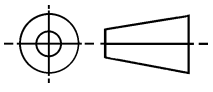

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AEROSPACE STANDARD

INSULATING COMPONENTS, MOLDED, ELECTRICAL, HEAT SHRINKABLE FLUOROPOLYMER COMPOSITE, SEMI-RIGID, CROSSLINKED

AS81765/7
SHEET 1 OF 4

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THIS SPECIFICATION IS APPROVED FOR USE BY ALL DEPARTMENTS AND AGENCIES OF THE DEPARTMENT OF DEFENSE.

THE COMPLETE REQUIREMENTS FOR PROCURING THE INSULATING COMPONENTS DESCRIBED HEREIN SHALL CONSIST OF THIS DOCUMENT AND THE ISSUE IN EFFECT OF MIL-I-81765.

REQUIREMENTS:

CONTINUOUS OPERATING TEMPERATURE RANGE: -55°C (-67°F) TO + 150°C (+302°F)

COLOR: UNLESS OTHERWISE SPECIFIED, MOLDED COMPONENTS FABRICATED TO THE REQUIREMENTS HEREIN SHALL BE FURNISHED IN BLACK.

PROPERTIES: PROPERTIES SHALL BE IN ACCORDANCE WITH TABLE I.

TABLE I. PHYSICAL PROPERTIES

Property	Requirement	Test Method (1)
Dimensions, inches As received After shrinkage	Shall be in accordance with the applicable drawing, specification or procurement document	4.6.1 Shrinkage 200°± 5°C 392°±9°F) for 10 minutes
Elastic memory, %, min Expansion Retraction	 250 90	4.6.2 200°± 5°C (392°± 9°F) for 5 minute; 4 inch stretch
Tensile strength, psi, (MPa), min	2200 (15.2)	4.6.3 2 inches/ minute
Tensile Stress at 100% Elongation, psi (MPa) max	1600 (11.0)	4.6.3 2 inches/ minute

TABLE I (CONTINUED)

Property	Requirement	Test Method
Ultimate elongation, %, min	300	4.6.3 2 inches/ minute
Low temperature flexibility	No cracking	4.6.4 -55°± 1°C (-67°± 2°F) for 4 hours
Heat shock	No dripping, flowing or cracking	4.6.5 225°± 5°C (437°± 9°F) for 4 hours
Heat resistance Tensile strength, psi, (MPa), min Elongation, %, min	1800 (12.4) 250	4.6.6 150°± 3°C (302°± 5°F) for 168 hours
Fluid resistance Tensile strength, psi, (MPa), min Elongation, %, min Weight increase, %, max	1800 (12.4) 250 6	4.6.7 (2)
Corrosion	No corrosion	4.6.8 135°± 2°C (275°± 4°F) for 16 hours
Dielectric strength, volts/mil, (kV/mm), min	200 (7.9)	ASTM D 2671
Volume resistivity, ohm-cm, min	10^{10}	ASTM D 257
Water absorption, %, max	1.0	ASTM D 570 23°± 2°C (73°± 4°F) for 24 hours
Flammability Ave. time of burning, sec., max. Ave. extent of burning, in. (mm) max	60 1 (25.4)	ASTM D 635
Fungus resistance	Rating of 1 or less	ASTM G 21
Specific gravity, max	1.6	ASTM D 792