

FEDERAL SUPPLY CLASS
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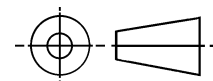
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THIRD ANGLE PROJECTION



ISSUED 2002-02

CUSTODIAN: SAE AMS "P"



AEROSPACE STANDARD

INSULATING COMPONENTS, MOLDED,
ELECTRICAL, HEAT SHRINKABLE POLYOLEFIN,
CROSSLINKED, SEMI-RIGID AND FLEXIBLE

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THIS SPECIFICATION IS 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 + 135°C (275°F)

CLASSIFICATION: THE POLYOLEFIN HEAT SHRINKABLE MOLDED COMPONENTS SHALL BE OF THE FOLLOWING TYPES:

- TYPE I SEMI-RIGID
- TYPE II FLEXIBLE

COLOR: UNLESS OTHERWISE SPECIFIED, THE MOLDED COMPONENTS SHALL BE FURNISHED IN BLACK.

PROPERTIES: PROPERTIES SHALL BE IN ACCORDANCE WITH TABLE I.

TABLE I. PHYSICAL PROPERTIES

Property	Requirement		Test Method
	Type I	Type II	
Dimensions, inches As received After shrinkage	Shall be in accordance with the applicable drawing, specification or procurement document		4.6.1 Shrinkage- 10 minutes at 175°+ 3°C (347°± 5°F)
Elastic memory, %, min Expansion Retraction	275 93	275 93	4.6.2 One minute at 150°+ 2°C (302°+ 4°F); 4 inch stretch

TABLE I (CONTINUED)

Property	Requirement		Test Method
	Type I	Type II	
Tensile strength, psi, min	1500	1200	4.6.3
Ultimate elongation, %, min	250	250	4.6.3
Low temperature flexibility	No cracking		4.6.4 $-55^{\circ} \pm 1^{\circ}\text{C}$ ($-67^{\circ} \pm 2^{\circ}\text{F}$) for 4 hours
Heat shock	No dripping, flowing or cracking		4.6.5 $225^{\circ} \pm 2^{\circ}\text{C}$ ($437^{\circ} \pm 5^{\circ}\text{F}$) for 4 hours
Heat resistance			4.6.6 $175^{\circ} \pm 1^{\circ}\text{C}$ ($347^{\circ} \pm 2^{\circ}\text{F}$) for 168 hours
Tensile strength, psi, min	1200	1000	
Elongation, %, min	200	200	
Fluid resistance			4.6.7 $25^{\circ} \pm 1^{\circ}\text{C}$ ($77^{\circ} \pm 2^{\circ}\text{F}$) for 24 hours
Tensile strength, psi, min	1200	750	
Elongation, %, min	200	200	
Corrosion	No corrosion		4.6.8
Hardness, Shore D	45 ± 5	40 ± 5	ASTM D 2240
Stiffness, psi, max	25,000	10,000	ASTM D 747
Dielectric strength, volts/mil, min	200	200	ASTM D 149
Volume resistivity, ohm-cm, min	10^{14}	10^{12}	ASTM D 257
Water absorption, %, max	0.5	0.5	ASTM D 570 24 Hrs @ 23°C (73°F)
Flammability			
Ave. time of burning, sec., max.	150	120	ASTM D 635
Ave. extent of burning, in. (mm) max	1 (25)	1 (25)	
Fungus resistance	Rating of 0		ASTM G 21
Specific gravity, max	1.40	1.40	ASTM D 792

SHELF LIFE (AS SUPPLIED): THE MANUFACTURER SHALL CERTIFY IN WRITING THAT THE MOLDED COMPONENTS, AFTER STORAGE AT A TEMPERATURE OF 18° TO 35°C (65° TO 95°F) FOR A PERIOD OF FOUR YEARS, SHALL CONFORM TO THE DIMENSIONAL REQUIREMENTS SPECIFIED HEREIN AND IN THE CONTRACT OR PURCHASE ORDER.

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