MILITARY SPECIFICATION

PLASTIC RODS AND TUBES, THERMOSETTING, LAMINATED

This amendment forms a part of Military Specification MIL-P-79C, 15 June 1961, and is mandatory for use by all Departments and Agencies of the Department of Defense.

Pages 6, 8, and 10; paragraphs 4.1 through 4.4.2 and tables XI and XII: Delete and substitute the following:

"4.1 Responsibility for inspection.- Unless otherwise specified in the contract or purchase order, the supplier is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified, the supplier may utilize his own facilities or any commercial laboratory acceptable to the Government. The Government reserves the right to perform any of the inspection set forth in the specification where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements.

"4.2 Quality conformance inspection.-

"4.2.1 Sampling for quality conformance inspection.- Sampling for quality conformance inspection shall be performed in accordance with MIL-STD-105, except as otherwise specified herein. For purposes of sampling, an inspection lot for examination and tests shall consist of all material of the same type, form, range of size (see table X), and brand.

"4.2.2 Examination.- Examination of plastic rod or tube shall be made in accordance with 4.2.2.1 through 4.2.2.4. The lot size, for purpose of determining the sample size in accordance with MIL-STD-105, shall be expressed in units of rods or tubes, as applicable (see 4.2.2.1 and 4.2.2.2) and in units of shipping containers (see 4.2.1.3).

"4.2.2.1 Appearance and workmanship of plastic rod or tube.- The sample unit for the following examination shall be one rod or tube of the specified type plastic:

Examine	Defect	Classification	
		Major	Minor
Appearance and workmanship	Not homogeneous.	X	
	Not uniform in texture and finish.		X
	Presence of foreign matter, grit, or abrasives.	X	
	Any crack, break, bulge, blisters, wrinkles, scratches, dents, heat marks, voids or resin pockets.	X	
	Any separation of laminations.	X	
	Laminations not as specified. Ragged or rough edges or sides.	X	
	Not natural in color (see 3.3).		X
	Surface finish not as specified (see 3.4).		X

FSC 9330

"4.2.2.2 Dimensions.- The sample unit for the following examination shall be one rod or tube of the specified type plastics:

Examine	Defect
Rods	
Length	
Standard rods	Varies by more than plus or minus 1 inch from length specified.
Cut rods	Varies by more than the plus or minus tolerances specified in table IV.
Diameter	Varies by more than the plus or minus tolerances specified in table VII.
Tubes	
Length	
Standard tubes	Varies by more than plus or minus 1 inch from length specified.
Cut tubes	Varies by more than the plus or minus tolerances specified in table V.
Diameter (inside and outside)	Varies by more than the plus or minus tolerances specified in table VIII.
Wall thickness	Varies by more than plus or minus the tolerances specified in table IX.

"4.2.2.3 Preparation for delivery.- An examination shall be made to determine that the packaging, packing, and markings comply with the requirements of section 5 of this specification. The sample unit for the following examination shall be one shipping container, fully packed, selected just prior to the closing operation. Shipping containers, fully prepared for delivery, shall be examined for closure defects.

Examine	Defect
Packaging	Unit package not packaged as specified.
	Packaging material not as specified.
	Not wrapped, boxed or otherwise protected against abrasion and deformation.
Packing	Not in accordance with specified requirements.
	Container not as specified, closure not accomplished by specified or required methods or materials.
	Any nonconforming component, component missing, damaged or otherwise defective affecting serviceability.
	Inadequate application of components; such as, incomplete closures of case liners, container flaps, loose or inadequate strappings, bulged or distorted containers.
Count	Less than specified or indicated quantity.
Weight	Gross or net weight exceeds specified requirements.
Markings	Interior or exterior markings (as applicable) omitted, illegible, incorrect, incomplete, or not in accordance with specified requirements.

"4.2.2.4 Inspection levels and acceptable quality levels (AQL's) for examination.- The inspection levels for determining the sample size and the acceptable quality levels (AQL's), expressed in defects per 100 units, shall be as follows:

Examination paragraph	Inspection level	Acceptable quality level
4.2.2.1	II	1.5 major and 6.5 minor
4.2.2.2	S-4	6.5
4.2.2.3	S-3	4.0 major and 10.0 minor

"4.2.3 Testing.- Plastic rods or tubes shall be tested for the applicable characteristics as indicated in table XI on each lot presented for inspection. The sample unit shall be two rods or tubes, 24 inches long. The inspection level for determining the sample size shall be S-1 except that not less than two sample units shall be randomly selected throughout the lot. The lot size shall be expressed in units of plastic rods or tubes, as applicable. The acceptable quality level (AQL) shall be 6.5 percent for each characteristic concerned."

Table XI - Instructions for testing.

Characteristics	Specification reference		Requirements applicable to		Results reported as	
	Requirement	Test method	Individual unit	Lot average	Pass or fail 1/	Numerically to nearest 2/
Property values (form R)	table I					
Water absorption		4.6.2	--	X	--	0.01 percent
Compressive strength (axially)		4.6.4	--	X	--	psi
Flexural strength		4.6.5	--	X	--	psi
Specific gravity		4.6.6	--	X	--	0.01
Property values (form T_r)	table II					
Water absorption		4.6.2	--	X	--	0.01 percent
Dielectric strength perpendicular to laminations (short time)						
As received (type PBG, PBM, FBE, GMG)		4.6.3	--	X	--	volts per mil
Immersion conditioning (type FBE)		4.6.3	--	X	--	volts per mil
Immersion conditioning (type PBG)		4.6.3	--	X	--	volts per mil
Compressive strength (axially)		4.6.4	--	X	--	psi
Specific gravity		4.6.6	--	X	--	0.01
Property values (form T_m)	table III					
Water absorption		4.6.2	--	X	--	0.01 percent
Dielectric strength perpendicular to laminations (short time)		4.6.3	--	X	--	volts per mil
Compressive strength (axially)		4.6.4	--	X	--	psi
Specific gravity		4.6.6	--	X	--	0.01
Machinability	3.1.3	3.1.3	X	--	X	--
Warpage	3.1.5	4.6.7	X	--	--	0.1 percent

1/ If failure is indicated, report description of failure.
2/ Test reports shall include all values on which results are based.

Custodians:
Army - EL
Navy - SH
Air Force - 11
Review activities:
Army - EL, MR
Navy - SH
Air Force - 11, 99
User activities:
Army - MO, MU
Navy - WP, YD

Preparing activity:
Navy - SH
(Project 9330-0184)