

MIL-B-26701E
AMENDMENT-1
3 July 1984

MILITARY SPECIFICATION

BOTTLES, SCREW CAP AND CARBOYS
POLYETHYLENE PLASTIC

This amendment forms a part of Military Specification MIL-B-26701E, dated 14 May 1982, and is approved for use by all Departments and Agencies of the Department of the Defense.

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2.2 Change first paragraph to read as follows:

"2.2 Other publications. The following documents form a part of this specification to the extent specified herein. The issues of the document which are indicated as DOD adopted shall be the issue listed in the current DODISS and the supplement thereto, if applicable.

Add, under AMERICAN SOCIETY FOR TESTING AND MEASURING MATERIALS (ASTM) STANDARDS:

"D 1209 - Standard Test Method for Color in Clear Liquids (Platinum-Cobalt Scale)"

Add the following reference and paragraphs after ASTM address:

"SOCIETY OF THE PLASTICS INDUSTRY

PBI-3-1968, Rev. 1, 1978 - Vertical Compression Test of Plastic Bottles.

(Applications for copies should be addressed to the Society of The Plastics Industry, Inc. 355 Lexington Avenue, New York, New York 10017).

(Industry association specifications and standards are generally available for reference from libraries. They are also distributed among technical groups and using Federal agencies.).

2.3 Order of Precedence. In the event of a conflict between the text of this specification and the references cited herein the text of this specification shall take precedence."

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PAGE 2 (cont'd)

3.2 Delete in its entirety and substitute the following:

"3.2 Shape. One gallon bottles may be oblong. Other bottles including those of one gallon capacity and carboys may be round or modified square about their vertical axis. All shall be one piece, seamless construction. Pinchoff welds are not to be construed as seams. Unless otherwise specified, handles formed as integral parts of the bottles shall be provided for 1-quart (0.95L) and 1-gallon (3.8L) bottles (see 6.2). When the threads of the bottle necks and bottle caps are fully engaged, the tops of the caps shall be flush with or lower than the tops of the molded handles."

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TABLE I - Place an asterisk (*) after the 1-gallon entry in all three columns and add footnote to bottom of TABLE:

"1-Gallon (3.8 LITERS)*	6.00±0.50 (152±13)*	11.50±0.50 (292±13)*
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* "Oblong one gallon bottles shall have maximum heights (with fully engaged caps) and girths of 12 1/2 inches and 22 1/2 inches, respectively."

3.7 and 3.7.1 Delete in entirety and substitute the following:

"3.7 Compression Tests.

3.7.1 Compression Test (Carboys). The jacketed carboys shall withstand a compressive load of 5,000 pounds without showing signs of leakage when tested as specified in 4.4.3.

3.7.2 Vertical Compression Test. When empty, the oblong one gallon bottles shall have an 80 pound minimum compressive yield strength when tested as specified in 4.4.7."

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After 3.13, add the following:

"3.14 Jackets for Carboys. Plastic carboys of 6-1/2 (25L), and 13-gallons (49.2L) capacities shall be cased within plywood, wood, metal, or other suitable jackets. Jackets shall contain no protrusions which could abrade or puncture the bottle."

Paragraph 4.3.1.1 under DEFECTS (Major), 6th line from bottom of chart:
Change "(see 3.7)" to "(see 3.14)."

Add to the end of list of DEFECTS (Major) under Appearance and Construction the following:

PAGE 4 (cont'd)

"The heights of fully engaged caps higher than adjacent handles on oblong one gallon bottles."

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Delete the first 5 lines at top of page and substitute the following:

EXAMINE	DEFECTS (Major)
Outside Diameter	Not within tolerance specified in Table I for the applicable size bottle or carboy.
Height (excluding cap)	Not within tolerance specified in Table I for the applicable size bottle or carboy.
Oblong one gallon bottles:	
Height (including fully engaged cap)	Exceeds maximum height specified in Table I.
Girth	Exceeds maximum height specified in Table I.

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Delete Table II in its entirety and substitute the following:

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TABLE II - Instructions for Testing

Characteristic	Requirement	Test Method	Requirements Applicable		Description or Numerical Point of Failure as Applicable 1/	Results Reported to Nearest Percent or Grams/10 min 2/
			Sample Unit	Lot Average		
Outage	3.8	4.4.1	X	1		Percent
Drop Test (Bottles) (Carboys)	3.9	4.4.2.1	X	1	X	-----
		4.4.2.2	X	2	X	-----
Compression Test (Carboys)	3.7.1	4.4.3	X	1	X	-----
				(1 bottom, 1 top)		
Vertical Compression Test	3.7.2	4.4.7	X	1	X	-----
	3.1	4.4.4	X	1	X	-----
Chemical Resistance	3.10	4.4.5	X	1		Grams/10 minutes
Bottle					X	-----
Contents					X	-----

NOTES:

- 1/ If failure is indicated, report either description or numerical point of failure, as applicable.
 2/ Test reports shall include all values on which results are based.

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4.4.3 Delete title "Compression test.", substitute the following:"Compression test (carboys)."

4.4.5 Delete in its entirety and substitute the following:

"4.4.5 Chemical resistance. The bottles and carboys shall be filled to stated capacity with solution of sulfuric acid having a specific gravity of 1.28 then stored at a temperature of $50^{\circ}\text{C} \pm 2^{\circ}$ ($122^{\circ}\text{F} \pm 4^{\circ}\text{F}$) in a constant temperature cabinet for a period of 21 days. The bottles, carboys and acid shall be examined before the test and upon removal from storage for compliance with paragraph 3.10. Before and after the extended elevated temperature exposure, the acid color shall be determined per ASTM D1209, the Standard Test Method for Color of Clear Liquids (Platinum-Cobalt Scale). The maximum change shall not exceed the color difference between consecutive Nessler tubes, that have been prepared and labeled in accordance with paragraph 6.2 and Table 2 of ASTM D1209."

Following 4.4.6 add the following paragraph:

"4.4.7 Vertical compression test. For compliance with 3.7.2, the bottles shall be tested in accordance with The Society of The Plastics Industry Specification PBI-3-1968, Rev. 1 of 1978, Vertical Compression Test of Plastic Bottles."

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6.1 Delete in its entirety and substitute the following:

"6.1 Intended use. The plastic bottles and carboys covered by this specification are intended for use as containers for mildly corrosive liquids within the limitations prescribed by DOT and Civil Aeronautics Board (CAB) regulations and military directives relating to shipment. Containers, which are not marked to indicate conformity to applicable DOT container specifications, shall be used only for items not regulated by DOT tariffs and for regulated items for which non-specification polyethylene containers are permitted. Oblong one gallon bottles are of the conventional configuration common to the commercial packaging of antifreeze."

Custodians:
Army - GL
Navy - SA
Air Force - 69

User:
Army -
Navy - AS, MC
Air Force -

Review activities:
Army - MD, SM, AR
Navy -
Air Force - 99
DLA - GS

Preparing activity:
Air Force - 69

Project number:
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