

INCH-POUND

MIL-P-85891A
AMENDMENT 2
26 June 1998
SUPERSEDING
AMENDMENT 1
19 December 1994

MILITARY SPECIFICATION
PLASTIC MEDIA
FOR REMOVAL OF ORGANIC COATINGS

This amendment forms a part of MIL-P-85891A, dated 1 April 1992, and is approved for use by all Departments and Agencies of the Department of Defense.

PAGE 1

1.1: In the first line, delete "six" and substitute "seven".

1.2.1: Add new type:

"Type VII - Starch-g-acrylic"

PAGE 2

1.2.3: Delete paragraph number and substitute: "1.2.2"

1.2.3: Add new color no:

"7 Type VII - Off White"

1.2.3: Add to the note: "Type VII shall only be off white".

PAGE 4

2.2: Add, after ASTM D792:

"ASTM-D2240 - Rubber Property - Durometer Hardness,
Standard Test Method for (DoD adopted)"

AMSC/NA

1 of 8

FSC 5350

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3.2: First sentence: After "(for Type V)" delete "or", insert a comma, and after "(for Type VI)", insert "or a starch graft acrylic polymer (for Type VII)".

3.2.1: Add values for type VII to the tabulated list, in the "Barcol hardness" and "Approx. MOH hardness" columns, respectively, as shown:

"Type VII	72 to 79 (Shore D hardness)	2.0"
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3.2.2: Second sentence: Change to read: "Type V and Type VII media shall contain no inorganic pigments."

3.2.2: Add to list:

"Type VII	Off-white"
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3.2.3: Third sentence: Change "Figures 1 through 6,..." to read "Figures 1 through 7,..."

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3.5: Delete first sentence and substitute as follows:

"The finished product shall conform to the performance property requirements of table III and the surface residue and anti-static behavior requirements of 3.5.1 and 3.5.2, respectively, when tested using the 20-30 particle size distribution for type I through type VI material or the 20-50 particle size distribution for type VII material."

3.5.1: Second sentence: Delete "Type V" and replace it with "Types V and VII".

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Table I: Delete table I and replace with new table as follows:

Table I. Physical and chemical properties.

Property	Requirement by Type							Test Para.
	I	II	III	IV	V	VI	VII	
Chlorine content (ppm), max.	Trace	Trace	Trace	Trace	Trace	Trace	Trace	4.5.3
Ash content, max. (% by weight)	1.0	2.0	2.0	2.0	0.5	0.5	1.0	4.5.4
Iron Content, max. (% by weight)	0.05	0.10	0.10	0.10	0.05	0.05	0.05	4.5.4.1
Specific Gravity Minimum	1.15	1.47	1.47	1.47	1.10	1.28	1.38	4.5.5
maximum	1.25	1.52	1.52	1.52	1.20	1.33	1.43	
Extract Content, max (% by weight)	5.0	1.0	1.0	1.0	<u>1</u> /	1.0	10.0 <u>2</u> /	4.5.6
pH of Water Extract minimum	4	4	4	4	4	4	4	4.5.7
maximum	8	8	8	8	8	8	8	
Conductivity, (umho/cm, max.)	100	100	100	100	100	100	100	4.5.7
Water Absorption (% by weight, max.)	2.0	10.0	10.0	10.0	2.0	2.0	15.0	4.5.8
Heavy Particulates (% by weight, max.)	0.02	0.02	0.02	0.02	0.02	0.02	0.02	4.5.9
Light Particulates (% by weight, max.)	0.1	1.0	1.0	1.0	0.1	0.1	1.0	4.5.9

Notes:

1/ Because of the solubility characteristics of type V materials, the extract content shall be a minimum of 95% by weight minimum.

2/ In addition, extract content shall be no less than 5.0 percent by weight.

Table II: Delete table II and insert new a new table II as follows:

Table II. Particle size distribution.

U.S Standard Screen Size	12-20		12-16		16-20		20-30		20-40		20-50		30-40		40-60		60-80	
	Maximum %		Maximum %		Maximum %		Maximum %		Maximum %		Maximum %		Maximum %		Maximum %		Maximum %	
	Retain	Pass	Retain	Pass	Retain	Pass	Retain	Pass	Retain	Pass	Retain	Pass	Retain	Pass	Retain	Pass	Retain	Pass
10	0.1	---	0.1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
12	5.0	---	5.0	---	0.1	---	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	20	15	---	0.1	---	0.1	---	0.1	---	---	---	---	---	---	---
20	---	20	---	5.0	---	20	15	---	15	---	15	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---	0.1	---	---	---	---	---
30	---	5.0	---	---	---	5.0	---	20	---	60	---	75	15	---	---	---	---	---
35	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.1	---	---	---
40	---	---	---	---	---	---	---	5.0	---	20	---	---	---	20	5.0	---	---	---
50	---	---	---	---	---	---	---	---	---	---	---	20	---	---	---	---	0.1	---
60	---	---	---	---	---	---	---	---	---	5.0	---	---	---	5.0	---	20	5.0	---
80	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	20
100	---	1.0	---	1.0	---	1.0	---	2.0	---	2.0	---	2.0	---	3.0	---	5.0	---	5.0

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Table III: Delete table III and insert a new table III as follows:

Table III. Performance characteristics.

Property	Requirement by Type							Test Para.
	I	II	III	IV	V	VI	VII	
<u>Blast Parameters</u>								4.5.11
Nozzle pressure (psi) <u>1/</u>	50	25	25	25	30	25	45	
Feed rate (lbs/hr)	215-245	140-170	125-155	140-170	140-170	130-160	400-450	
<u>Property</u>								4.5.11.1
Stripping rate Sq ft/minute (min.)	0.15	0.15	0.15	0.15	0.15	0.15	0.15	
Aggressiveness mg/sq. cm, (max.)	0.20	0.50	3.00	0.50	0.20	0.75	0.25	4.5.11.2
Consumption % for 4 cycles (max.)	80	52	52	52	24	60	70 <u>2/</u>	4.5.11.3

Notes:

1/ Air pressure in the hose immediately adjacent to the nozzle as measured with a hypodermic needle.

2/ Consumption rate is based on a 50 mesh screen.

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4.5.1: After first sentence, add: "Shore D hardness shall be determined in accordance with ASTM D2240."

Table V: Add to the packaging defect paragraph, as follows: "Any signs of internal moisture."

PAGE 15

4.5.9.1: Delete and substitute:

"4.5.9.1 Solvent preparation. The solvent mixtures shall be prepared from fluid conforming to P-D-680 (specific gravity of 0.78) and a perfluoroalkane solvent (3M Fluorinert-40, or equivalent) (specific gravity of 1.87). Two solvent mixtures shall be prepared to yield specific gravities as follows:

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or spillage of contents prior to opening by the user. The bag shall protect the contents from loss or damage during shipment, handling, and storage."

PAGE 20

6.1: Delete next to the last sentence and substitute: "Type V and VII residues can be removed using a detergent wash and, after rinsing and drying, a solvent wipe with methyl ethyl ketone or similar solvent."

PAGE 21

6.6: Second sentence: Delete "Type IV and VI" and substitute "Type IV, VI and VII".

PAGE 22

6.7: Add identifier as follows:

"Type VII - 7"

6.7: Under "XXXX": Delete: "1.2.3" and substitute "1.2.2".

6.8, last line: Delete: "trichlorotrifluoroethane".

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After Figure 6: Insert Figure 7 as the last page of the document.

CONCLUDING MATERIAL

Custodians:

Army - AV
Navy - AS
Air Force - 99

Preparing activity:

Navy - AS

(Project No. 5350-0048)

Review activities:

Air Force - 84

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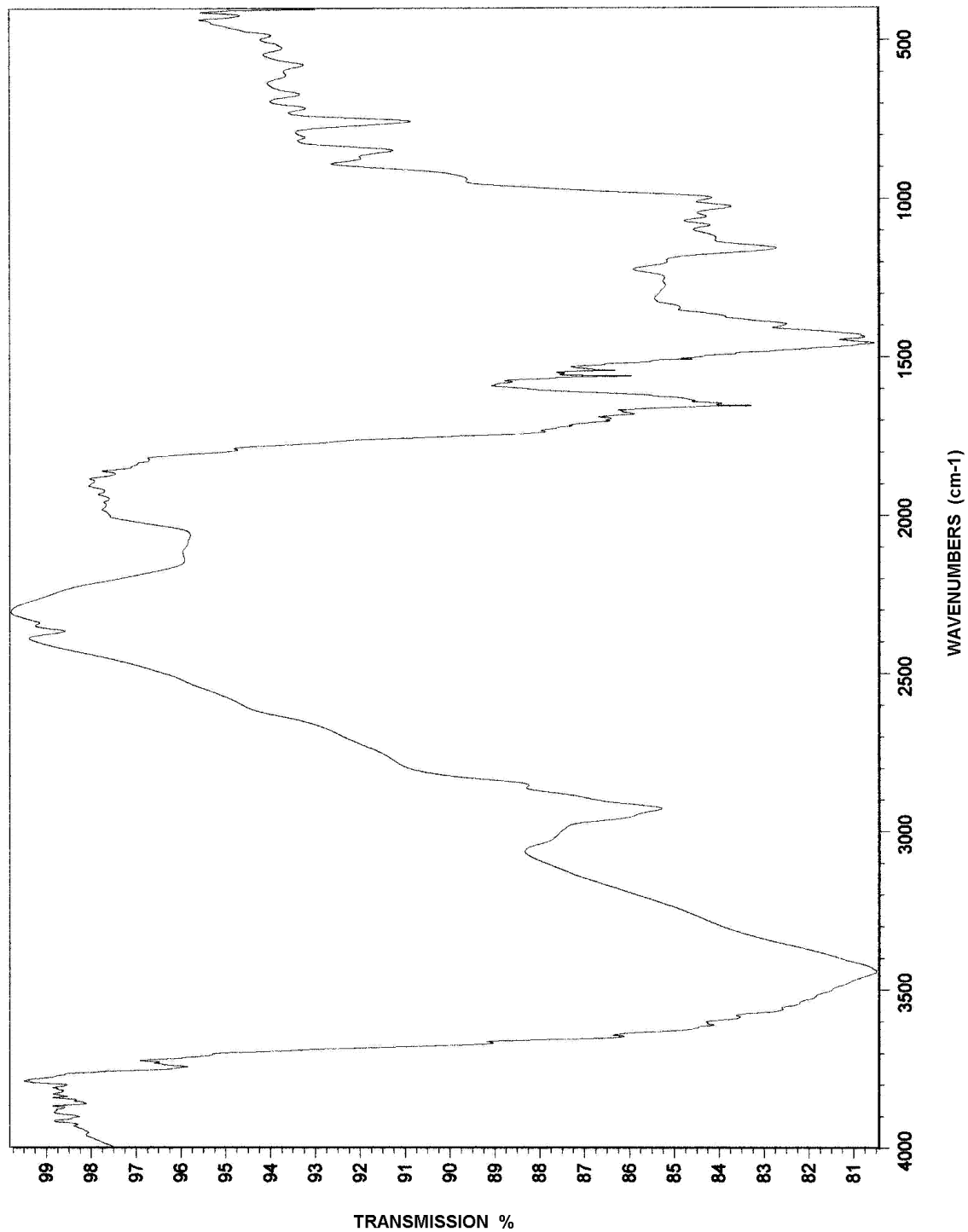


FIGURE 7. Type VII - Starch-g-acrylic.