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PLASTEC NOTE N30

SPECIFICATIONS AND OTHER STANDARDIZATION DOCUMENTS INVOLVING CELLULAR PLASTICS (PLASTIC FOAMS), CUSHIONING AND RELATED MATERIALS

JULY 1976

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

This is a compilation of all known U.S. specifications and other standardization documents involving cellular plastics (plastic foams), cushioning materials, and related materials, including cellular rubbers. A total of 286 documents covered include ASTM Specifications and Standards, Military Specifications, Standards and Handbooks, Federal Specifications, Federal Test Method Standards, Society of Automotive Engineers (SAE) Aerospace Materials Specifications (AMS's) and SAE Recommended Practices, Underwriters

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20. ABSTRACT (Continued)

Laboratories (UL) Standards, National Fire Protection Association (NFPA) Standards, and National Bureau of Standards Voluntary Product Standards and Simplified Practice Recommendations. A subject index is provided.

PLASTEC NOTE N30

SPECIFICATIONS AND OTHER STANDARDIZATION DOCUMENTS INVOLVING CELLULAR PLASTICS (PLASTIC FOAMS), CUSHIONING AND RELATED MATERIALS

by

ARTHUR H. LANDROCK

JULY 1976

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DISCLAIMER

In this compilation PLASTEC has attempted to list all standardization documents known to be relevant to cellular plastics and related materials. It is recognized, however, that there must necessarily be some omissions, and for this the author apologizes.

ABSTRACT

This is a compilation of all known U.S. specifications and other standardization documents involving cellular plastics (plastic foams), cushioning materials, and related materials, including cellular rubbers. A total of 286 documents covered include ASTM Specifications and Standards, Military Specifications, Standards and Handbooks, Federal Specifications, Federal Test Method Standards, Society of Automotive Engineers (SAE) Aerospace Materials Specifications (AMS's) and SAE Recommended Practices, Underwriters Laboratories (UL) Standards, National Fire Protection Association (NFPA) Standards, and National Bureau of Standards Voluntary Product Standards and Simplified Practice Recommendations. A subject index is provided.

SCOPE AND NOTES

This Note is intended as a compilation of all known United States specifications and other standardization documents involving cellular plastics (plastic foams), cushioning materials, and related materials, including cellular rubbers. Documents covered include ASTM Specifications and Standards, Military Specifications, Military Standards, Military Handbooks, Federal Specifications, Federal Test Method Standards, Society of Automotive Engineers Aerospace Materials Specifications and SAE Recommended Practices, Underwriters Laboratories Standards, National Fire Protection Association Standards and National Bureau of Standards Voluntary Product Standards and Simplified Practice Recommendations.

A total of 286 documents are listed. In the case of the ASTM specifications and standards, documents selected for listing include 1. standards known to be specific to cellular plastics and related materials and 2. standards not specific to cellular plastics, but which have been listed because they may be used for cellular plastics and similar materials. The other sources list only documents specific to cellular plastics or rubbers and closely related materials. A subject index is included to assist the reader in finding relevant specifications, standards, and other documents.

In the case of ASTM documents the Parts (volumes) in which the standards are published are listed with the entries. Military documents include Federal Supply Classification (FSC) listings or DoD Area Assignments, designations of the preparing activity, issue date of the latest revision, indication of coordination status, and of the existence of a Qualified Products List (QPL). Federal documents have similar listings, but none of those listed have QPL's nor limited coordination, and so there are no coded listings tabulated. In the case of Federal Test Method Standards, with one exception, the individual test methods are listed separately, with titles and dates of issue.

The reader who is unfamiliar with specifications and standards will find it helpful to refer to Chapter 11, "Commercial and Government Specifications and Standards," by Arthur H. Landrock and Norman E. Beach, PLASTEC, in the Handbook of Plastics and Elastomers, edited by Charles A. Harper, and published by McGraw-Hill Book Company in 1975.

The author welcomes comments on the usefulness of this Note. Suggestions as to documents that are applicable and should be added to any possible future revision would be very much appreciated.

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120	ASTM D 2926-70 Part 36 Standard Method of Test for BULK MODULUS OF ELASTICITY OF SYNTACTIC FOAM (PISTON-CYLINDER METHOD)
121	ASTM D 2953-71 Part 35 Standard Classification System for POLYMERIC MATERIALS FOR SERVICE IN IONIZING RADIATION
122	ASTM D 3014-74 Part 35 Standard Method of Test for FLAMMABILITY OF RIGID CELLULAR PLASTICS
123	ASTM D 3045-74 Part 35 Standard Recommended Practice for HEAT AGING OF PLASTICS WITHOUT LOAD
124	ASTM D 3100-72 Part 36 Standard Method of Test for ALKALINITY OF HOLLOW GLASS MICROSPHERES
125	ASTM D 3101-72 Part 36 Standard Method of Test for BULK DENSITY AND PACKING FACTOR OF HOLLOW GLASS MICROSPHERES
126	ASTM D 3102-72 Part 36 Standard Method of Test for HYDROSTATIC COLLAPSE STRENGTH OF HOLLOW GLASS MICROSPHERES
127	ASTM D 3204-73 Part 15 Standard Specification for PREFORMED CELLULAR PLASTIC PRESSURE-RELIEF JOINT FILLERS
128	ASTM E 6-66 (1973) Parts 10, 35 Standard Definitions of Terms Relating to METHODS OF MECHANICAL TESTING
129	ASTM E 29-67 (1973) Part 35 Standard Recommended Practice for INDICATING WHICH PLACES OF FIGURES ARE TO BE CONSIDERED SIGNIFICANT IN SPECIFYING LIMITING VALUES

Ref. No.	ASTM Specifications and Standards
130	ASTM E 84-75 Part 18 Standard Method of Test for SURFACE BURNING CHARACTERISTICS OF BUILDING MATERIALS
131	ASTM E 96-66 (1972) Parts 18, 35 Standard Methods of Test for WATER VAPOR TRANSMISSION OF MATERIALS IN SHEET FORM
132	ASTM E 111-61 (1972) Part 10 Standard Method of Test for YOUNG'S MODULUS AT ROOM TEMPERATURE
133	ASTM E 119-75 Part 18 Standard Methods of FIRE TESTS OF BUILDING CONSTRUCTION AND MATERIALS (INCLUDING TENTATIVE REVISION)
134	ASTM E 143-61 (1972) Part 10 Standard Method of Test for SHEAR MODULUS AT ROOM TEMPERATURE
135	ASTM E 162-75 Part 18 Standard Method of Test for SURFACE FLAMMABILITY OF MATERIALS USING A RADIANT HEAT ENERGY SOURCE
136	ASTM E 171-63 (1972) Part 35 Standard Specification for STANDARD ATMOSPHERES FOR CONDITIONING AND TESTING MATERIALS
137	ASTM E 177-71 Part 35 Standard Recommended Practice for USE OF THE TERMS PRECISION AND ACCURACY AS APPLIED TO MEASUREMENT OF A PROPERTY OF A MATERIAL
138	ASTM G 21-70 Parts 35, 41 Standard Recommended Practice for DETERMINING RESISTANCE OF SYNTHETIC POLYMERIC MATERIALS TO FUNGI
139	ASTM G 22-67T Parts 35, 41 Standard Recommended Practice for DETERMINING RESISTANCE OF PLASTICS TO BACTERIA
140	ASTM G 23-69 Parts 35, 41 Standard Recommended Practice for OPERATING LIGHT- AND WATER-EXPOSURE APPARATUS (CARBON-ARC TYPE) FOR EXPOSURE OF NONMETALLIC MATERIALS

Society of Automotive Engineers (SAE)

Ref. No.	Aerospace Materials Specifications (AMS) (14 specs)	
141	AMS 3193	SILICONE RUBBER SPONGE, CLOSED CELL - MEDIUM, EXTREME LOW TEMPERATURE, May 1, 1968
142	AMS 3194	SILICONE RUBBER SPONGE, CLOSED CELL, FIRM, EXTREME LOW TEMPERATURE, May 1, 1968
143	AMS 3195B	SILICONE RUBBER SPONGE, CLOSED CELL, MEDIUM, May 1, 1968
144	AMS 3196B	SILICONE RUBBER SPONGE, CLOSED CELL, FIRM, May 1, 1968
145	AMS 3197H	SPONGE, CHLOROPRENE-RUBBER, SOFT, Dec. 1, 1973
146	AMS 3198H	SPONGE, CHLOROPRENE-RUBBER, MEDIUM, Dec. 1, 1973
147	AMS 3199H	SPONGE, CHLOROPRENE RUBBER, FIRM, Dec. 1, 1973
148	AMS 3570A	POLYURETHANE FOAM, FLEXIBLE - OPEN CELL, MEDIUM FLEXIBILITY, 2.5 LB PER CU FT, July 15, 1963
149	AMS 3635A	PLASTIC SHEET - CELLULAR, SHOCK ABSORBING, CLOSED CELL, FOAMED, MODIFIED VINYL SHEET, June 3, 1960
150	AMS 3709	SYNTACTIC FOAM TILES, March 1, 1974
151	AMS 3730	POTTING COMPOUND - FOAMED EPOXY TYPE, AMINE HARDENED, Aug. 15, 1955
152	AMS 3851A	FIRE RESISTANT PROPERTIES FOR AIRCRAFT MATERIALS, Nov. 1, 1954
153	AMS 3852A	FLAME RESISTANT PROPERTIES FOR AIRCRAFT MATERIALS, Nov. 1, 1954
154	AMS 3912	RADOMES - FOAM SANDWICH, March 1, 1974

(To obtain copies of these documents contact the Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, PA 15096.)

SAE Recommended Practices (from 1976 SAE Handbook) (7 specs)

155	SAE J 15	FLEXIBLE FOAMS MADE FROM POLYMERS OR COPOLYMERS OF VINYL CHLORIDE, p. 12.24 (same as ASTM D 1565-58T, Sep. 1960, Ref. No. 85)

Ref. No.	SAE Recommended Practices	
156	SAE J 17a	LATEX FOAM RUBBERS, p. 12.30 (conforms substantially to ASTM D 1055, Aug. 1971, Ref. No. 73)
157	SAE J 18b	SPONGE- AND EXPANDED CELLULAR-RUBBER PRODUCTS, p. 12.33 (substantially same as ASTM D 1056, Dec. 1972, Ref. No. 74)
158	SAE J 369a	FLAMMABILITY OF AUTOMOTIVE INTERIOR MATERIALS - HORIZONTAL TEST METHOD, p. 12.63, June 1972 (foams not discussed but probably covered)
159	SAE J 388	DYNAMIC FLEX FATIGUE TEST FOR SLAB POLYURETHANE FOAM, p. 34.28, March 1969
160	SAE J 815	LOAD DEFLECTION TESTING OF URETHANE FOAMS FOR AUTOMOTIVE SEATING, p. 34.31, March 1962
161	SAE J 954	URETHANE FOR AUTOMOTIVE SEATING, p. 34.30, June 1966

(To obtain copies of these documents or of the current SAE Handbook contact the Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, PA 15096.)

Underwriters Laboratories (UL) Standards (1 std)

162	UL 94	TESTS FOR FLAMMABILITY OF PLASTIC MATERIALS FOR PARTS IN DEVICES AND APPLIANCES, 2nd Edition, May 2, 1975 (In this Standard there is a Horizontal Burning Test for Classifying Foamed Materials 94 HBF, 94 HF-1 and 94 HF-2.)

(To obtain copies of this Standard contact the Underwriters Laboratories, Inc., 2550 Dundee Road, Box 247, Northbrook, ILL 60062.)

National Fire Protection Association (NFPA) Standards (2 stds)

163	NFPA 205 M-T	TENTATIVE GUIDE FOR PLASTICS IN BUILDING CONSTRUCTION, May 1973
164	NFPA 231B	STANDARD FOR STORAGE OF CELLULAR RUBBER AND PLASTICS, 1974

(To obtain copies of these documents contact the National Fire Protection Association, Publications Dept., 470 Atlantic Avenue, Boston, MA 02210.)

Military Specifications (58 specs)

Ref. No.		FSC Category/ Area[1]	Preparing Activity[1]	Issue Date	Coordination and QPL
165	MIL-C-3133B(3) CELLULAR ELASTOMERIC MATERIALS, FABRICATED PARTS	9320	MR	28 Jan 71	
166	MIL-R-5001A(4) RUBBER CELLULAR SHEET, MOLDED AND HAND BUILT SHAPES: LATEX FOAM	9320	AS	19 Sep 74	
167	MIL-R-6130B(3) RUBBER, CELLULAR, CHEMICALLY BLOWN	9320	AS	28 May 71	
168	MIL-C-8087C CORE MATERIAL, FOAMED-IN-PLACE, URETHANE TYPE	9330	AS	24 Apr 68	
169	MIL-P-12420C PLASTIC MATERIAL, CELLULAR	9330	GL	21 Dec 71	
170	MIL-I-13042A(AT)[1] INSULATION SLEEVING, THERMAL, TUBULAR, FLEXIBLE	5640	AT	25 Mar 68	L
171	MIL-I-14511A(AT) INSULATION SHEET, CELLULAR PLASTIC: THERMAL	5640	AT	20 Oct 68	L
172	MIL-P-15280G PLASTIC MATERIAL, UNICELLULAR (SHEETS AND TUBES)	9330	SH	24 May 74	
173	MIL-F-16562(OS) INSULATION. SYNTHETIC, RUBBER-LIKE, CHEMICALLY EXPANDED, CELLULAR (SHEET FORM)	5640	OS	14 June 72	L
174	MIL-C-17435B(1) CUSHIONING MATERIAL, FIBROUS GLASS	8135	OS	29 Oct 56	
175	MIL-C-18345A CORE MATERIAL, CELLULAR CELLULOSE ACETATE	9330	AS	21 Nov 62	
176	MIL-M-18351E(SHIPS) MATTRESS, BERTH, SYNTHETIC SPONGE RUBBER, NAVAL SHIPBOARD	7210	SH	4 Jan 72	L
177	MIL-P-19644C PLASTIC MOLDING MATERIAL (POLYSTYRENE FOAM, EXPANDED BEAD)	9330	OS	10 July 70	

[1] See Appendix for explanation of codes, symbols, etc.

Ref. No.		FSC Category/ Area	Preparing Activity	Issue Date	Coordination and QPL
178	MIL-R-20092H RUBBER SHEETS AND MOLDED SHAPES, CELLULAR, SYNTHETIC OPEN CELL (FOAMED LATEX)	9320	SH	20 June 74	
179	MIL-P-21929B(1) PLASTIC MATERIAL, CELLULAR POLYURETHANE FOAM IN PLACE, RIGID AND 4 POUNDS PER CUBIC FOOT	9330	SH	22 June 70	
180	MIL-C-23734(1)(AS) CUSHIONING MATERIAL, CELLULOSIC, TREATED, FREE FLOW, TUBULAR	8135	AS	29 June 66	L
181	MIL-C-23806A(1)(EC) CABLE, RADIO FREQUENCY, COAXIAL, SEMIRIGID, FOAM DIELECTRIC, GENERAL SPECIFICATION	6145	EC	17 Sep 70	L
182	MIL-C-23806/1B(EC) CABLE, RADIO FREQUENCY, COAXIAL, SEMIRIGID, FOAM DIELECTRIC, 1/2 INCH, 50 and 75 OHM (RE-332/U, RG-334/U and RG-335/U)	6145	EC	17 Sep 70	L
183	MIL-C-23806/2B(EC) CABLE, RADIO FREQUENCY, COAXIAL, SEMIRIGID, FOAM DIELECTRIC, 7/8 INCH, 50 AND 75 OHM, (RG 332/U, RG 333/U, RG 336/U and RG 306A/U)	6145	EC	23 June 69	L
184	MIL-C-23806/3B(EC) CABLE, RADIO FREQUENCY, COAXIAL, SEMIRIGID, FOAM DIELECTRIC, 3/4 INCH, 50 OHM, JACKETED (RG-360/U)	6145	EC	23 June 69	L
185	MIL-S-24154A(1)(SHIPS) SYNTACTIC BUOYANCY MATERIAL FOR HIGH HYDROSTATIC PRESSURES	9330	SH	28 Mar 67	QL
186	MIL-S-24167A(SHIPS) SYNTACTIC MATERIAL, RIGID, POUR-IN-PLACE, STRUCTURAL VOID FILLING	9330	SH	6 Dec 72	L
187	MIL-I-24172(1)(SHIPS) INSULATION, PLASTIC, CELLULAR POLYURETHANE, RIGID, PREFORMED AND FOAMED IN PLACE	5640	SH	12 May 67	L
188	MIL-A-24179A(1)(SHIPS) ADHESIVE, FLEXIBLE UNICELLULAR - PLASTIC THERMAL INSULATION	8040	SH	11 July 69	QL
189	MIL-P-24249(1)(SHIPS) PLASTIC MATERIAL, CELLULAR POLYURETHANE, RIGID, VOID FILLER, POUR-IN-PLACE, LARGE SCALE AND INSTALLATION OF	9330	SH	6 Nov 67	NQL

Ref. No.		FSC Category/ Area	Preparing Activity	Issue Date	Coordination and QPL
190	MIL-P-24333(2)(SHIPS) PLASTIC MATERIAL, UNICELLULAR, SHEET, ELASTOMERIC	9330	SH	17 June 70	L
191	MIL-S-25392B SANDWICH CONSTRUCTION, PLASTIC RESIN, GLASS FABRIC BASE, LAMINATED FACINGS AND POLYURETHANE FOAMED IN PLACE CORE, FOR AIRCRAFT STRUCTURAL APPLICATIONS	9330	AS	8 May 68	
192	MIL-P-26514D(2) POLYURETHANE FOAM, RIGID OR FLEXIBLE, FOR PACKAGING	8135	69	25 Aug 75	
193	MIL-C-26861B(1) CUSHIONING MATERIAL, RESILIENT TYPE, GENERAL	8135	69	14 Mar 74	
194	MIL-S-27332A(USAF) SEAT CUSHION INSERT, POLYURETHANE FOAM, GENERAL SPECIFICATION FOR	1660	11	12 Jan 66	L
195	MIL-C-38226A(1)(USAF) CONTAINER, POLYURETHANE, RIGID OR ELASTIC FOR PACKAGING SMALL ENGINES	8115	69	7 May 74	L
196	MIL-S-38639A(1)(USAF) SHIPPING AND STORAGE CONTAINER, BOMB, CNU-109/E, RIGID POLYURETHANE, POUR-IN-PLACE FOR PACKAGING BOMBS, CHEMICAL, BLU-52/B	8140	70	13 Jan 69	L
197	MIL-P-40619A PLASTIC MATERIAL, CELLULAR, POLYSTYRENE (FOR BUOYANCY APPLICATIONS)	9330	SH	9 Dec 68	
198	MIL-P-43110B(AT) PLASTIC FOAM INSULATION, THERMAL (POLYURETHANE)	5640	AT	20 June 73	L
199	MIL-P-43226(MI) POLYETHER CUSHIONING MATERIAL, FOAM-IN-PLACE, FLEXIBLE	8135	MI	22 Apr 64	L
200	MIL-R-46089A(MI) RUBBER, SPONGE, SILICONE, CLOSED CELL	9320	MI	9 Mar 73	L
201	MIL-P-46111B(MR) PLASTIC FOAM, POLYURETHANE (FOR USE IN AIRCRAFT)	9330	MR	29 Nov 73	L
202	MIL-T-46151 TAPE, PRESSURE-SENSITIVE ADHESIVE, POLYURETHANE FOAM	9320	MR	16 Oct 70	
203	MIL-T-46586B(MU) TUBE, IGNITER FOR CHARGE, PROPELLING, 175MM, M86A2 (CELLULAR POLYURETHANE)	1320	PA	29 Feb 68	L

Ref. No.		FSC Category/ Area	Preparing Activity	Issue Date	Coordination and QPL
204	MIL-P-46847A(1)(MI) PLASTIC MATERIAL, FOAMED POLYURETHANE FOR ENCAPSULATING ELECTRONIC COMPONENTS	9330	MI	6 May 69	L
205	MIL-I-46882(MI) INSULATION SHEET AND STRIP, CELLULAR, ELASTOMERIC	5970	MI	14 Dec 73	L
206	MIL-P-46897(MI) POLYURETHANE FOAM	9330	MI	14 Dec 73	L
207	MIL-F-47095A(MI) FOAM, POLYURETHANE, FOR IMBEDDING ELECTRONIC COMPONENTS AND BOARDS	5970	MI	24 Sep 74	L
208	MIL-P-47099(MI) POLYURETHANE FOAM, RIGID, FOR PACKAGING AND ENCAPSULATION OF ELECTRONIC COMPONENTS	5970	MI	24 May 74	L
209	MIL-I-47149(MI) INSULATION MATERIAL (SOUND AND VIBRATION BARRIER)	5640	MI	7 June 74	L
210	MIL-F-47222(MI) FOAM, POLYURETHANE, RIGID	9330	MI	12 July 74	L
211	MIL-F-47254(MI) FOAM, POLYURETHANE, OPEN CELL, MEDIUM FLEXIBILITY	9330	MI	26 July 74	L
212	MIL-F-47285(MI) FOAM, POLYURETHANE, RIGID	9330	MI	9 Aug 74	L
213	MIL-F-52236(CE) FILTER ELEMENT, AIR, DIVER'S: POLYURETHANE FOAM	4220	ME	21 Aug 62	L
214	MIL-P-60312B(2)(MU) PARTS, MOLDED, PLASTIC FOAM, POLYSTYRENE (FOR USE WITH AMMUNITION)	8140	PA	27 Aug 73	L
215	MIL-T-60394A(1)(MU) TAPE, PRESSURE-SENSITIVE FILM FOAM, DOUBLE-COATED (FOR USE WITH AMMUNITION)	1375	PA	7 May 68	L
216	MIL-F-81254(WP) FOAM, URETHANE	1338	OS	15 Apr 65	L
217	MIL-M-81288(1)(AS) MOUNTING BASES, FLEXIBLE PLASTIC FOAM	5340	AS	15 July 68	L

Ref. No.		FSC Category/ Area	Preparing Activity	Issue Date	Coordination and QPL
218	MIL-F-81334A(AS) FOAM, PLASTIC, FLEXIBLE, OPEN CELL, POLYESTER TYPE, POLYURETHANE	5340	AS	1 May 69	L
219	MIL-B-83054A(1)(USAF) BAFFLE MATERIAL, AIRCRAFT FUEL TANK	9330	11	27 June 75	L
220	MIL-P-83379(1)(USAF) PLASTIC MATERIAL, CELLULAR POLYURETHANE, FOAM-IN-PLACE, RIGID (3 POUNDS PER CUBIC FOOT DENSITY)	9330	11	14 Apr 75	L
221	MIL-C-83400(USAF) CORE MATERIAL FOR METAL SANDWICH PANELS FOR SHELTER CONSTRUCTION (POLYURETHANE FOAM)	5410	11	29 Nov 72	L
222	MIL-F-???? PROCEDURES FOR FOAM-IN-PLACE PACKAGING	PACK	SM	Currently under coordination	
	Military Standards (4 stds)				
223	MIL-STD-401B SANDWICH CONSTRUCTIONS AND CORE MATERIALS; GENERAL TEST METHODS	5680	AS	26 Sep 67	
224	MIL-STD-670B CLASSIFICATION SYSTEM AND TESTS FOR CELLULAR ELASTOMERIC MATERIALS	9320	MR	30 Jan 68	
225	MIL-STD-768A INSTRUCTIONS FOR REPAIR OF AIRCRAFT AND WEAPONS REINFORCED PLASTIC AND SANDWICH STRUCTURES - PART 1, ALL PLASTIC CONSTRUCTION	MISC	AS	11 Sep 70	
226	MIL-STD-1186 CUSHIONING, ANCHORING, BRACING, BLOCKING AND WATERPROOFING; WITH APPROPRIATE TEST METHODS	PACK	ME	28 Oct 63	
	Military Handbooks (3 hdbks)				
227	MIL-HDBK-139(MU) PLASTIC, PROCESSING OF	9330	PA	30 Jan 67	L
228	MIL-HDBK-304A PACKAGE CUSHIONING DESIGN	PACK	PA	25 Sep 74	
229	MIL-HDBK-768(SM) RIGID POLYURETHANE FOAM PACKAGING DESIGN	PACK	SM	15 Jan 73	L

Federal Specifications (33 specs)

Ref. No.		Category/ Area	Preparing Activity	Issue Date	Coordination and QPL
230	L-C-001369(GSA-FSS) CUSHION, CARPET AND RUG, BONDED URETHANE	7220	FSS	10 Dec 69	
231	L-C-00167(GSA-FSS) CUSHION, CARPET AND RUG, VIRGIN URETHANE	7220	FSS	7 Sep 71	
232	L-P-386B INT AMEND 1 PLASTIC MATERIAL, CELLULAR, URETHANE (FLEXIBLE)	9330	FSS	25 May 73	
233	L-S-626C INT AMEND 1 (ARMY-GL) SPONGES, SYNTHETIC	7920	GL	13 Sep 67	
234	L-S-00626D(GSA-FSS) SPONGES, SYNTHETIC	7920	FSS	15 Jan 70	
235	AA-C-00275D(3) (GSA-FSS) CHAIRS, ROTARY AND STRAIGHT, ALUMINUM, OFFICE	7110	FSS	21 Feb 74	
236	HH-I-524B INSULATION BOARD, THERMAL (POLYSTYRENE)	5640	YD	6 Nov 72	
237	HH-I-530A INT AMEND 2 (YD) INSULATION BOARD, THERMAL (URETHANE)	5640	YD	18 Dec 75	
238	HH-I-550A INSULATION SLEEVING, THERMAL (URETHANE)	5640	ME	20 Mar 67	
239	HH-I-573B INSULATION, THERMAL (FLEXIBLE UNICELLULAR SHEET AND PIPE COVERING)	5640	ME	20 Feb 68	
240	HH-I-1751/GEN INSULATION SLEEVING, THERMAL (PIPE AND TUBE COVERING)	5640	ME	20 July 73	
241	HH-I-1751/2 INSULATION SLEEVING, THERMAL (FLEXIBLE UNICELLULAR PIPE COVERING)	5640	ME	27 July 73	
242	HH-I-1751/3A INSULATION SLEEVING, THERMAL, PIPE COVERING (CELLULAR GLASS)	5640	ME	10 Oct 73	
243	HH-I-1751/4 INSULATION SLEEVING, THERMAL, PIPE COVERING (URETHANE)	5640	ME	6 Aug 73	

Ref. No.		FSC Category/ Area	Preparing Activity	Issue Date	Coordination and QPL
244	ZZ-C-758 CUSHIONS, ARM, SPONGE RUBBER, FOR CRUTCHES	6515	DM	17 June 46	
245	ZZ-C-00766C(GSA-FSS) CUSHIONS, CHAIR AND STOOL	7210	FSS	12 May 71	
246	ZZ-C-811(1) CUSHION (UNDERLAY), CARPET AND RUG, SPONGE RUBBER AND SYNTHETIC RUBBER	7220	FSS	29 Nov 45	
247	ZZ-C-00811B(COM-NBS) CUSHION, CARPET AND RUG, CELLULAR RUBBER	7220	FSS	2 Jan 63	
248	ZZ-M-91E INT AMEND 1 (GSA-FSS) MATTRESS, BED, LATEX FOAM	7210	GL	20 Mar 68	
249	ZZ-P-75B(1) PAD, TYPEWRITER, SPONGE RUBBER	7510	FSS	16 Feb 72	
250	ZZ-P-00355(1) PILLOW, BED, (LATEX FOAM)	7210	FSS	15 Feb 66	
251	ZZ-P-001235(2) PILLOW, BED (FLAKED URETHANE)	7210	FSS	18 Apr 75	
252	LLL-I-535A(2) INSULATION BOARD, THERMAL AND INSULATION BLOCK, THERMAL	5640	YD	10 June 75	
253	PPP-C-795A CUSHIONING MATERIAL, FLEXIBLE, CELLULAR, PLASTIC FILM FOR PACKAGING APPLICATION	8135	GL	2 Dec 70	
254	PPP-C-843C CUSHIONING MATERIAL, CELLULOSIC	8135	GL	15 Feb 73	
255	PPP-C-850D(1) INT AMEND 4 CUSHIONING MATERIAL, POLYSTYRENE EXPANDED, RESILIENT (FOR PACKAGING USES)	8135	MR	18 July 72	
256	PPP-C-1120(2) INT AMEND 4 (USAF) CUSHIONING MATERIAL, UNCOMPRESSED BOUND FIBER FOR PACKAGING	8135	69	16 Feb 73	

Ref. No.		FSC Category/ Area	Preparing Activity	Issue Date	Coordination and QPL
257	PPP-C-1266B INT AMEND 1 (DSA-DM) CONTAINER, THERMAL, SHIPPING, FOR MEDICAL MATERIAL REQUIRING CONTROLLED TEMPERATURE RANGES	8115	DM	30 May 73	
258	PPP-C-1683(1) CUSHIONING MATERIAL, EXPANDED POLYSTYRENE LOOSE FILL BULK (FOR PACKAGING APPLICATION)	8135	69	10 Oct 73	
259	PPP-C-1752A(1) CUSHIONING MATERIAL, PACKAGING, UNICELLULAR POLYETHYLENE FOAM	8135	69	18 June 75	
260	PPP-C-1797(2) CUSHIONING MATERIAL, RESILIENT, LOW DENSITY, UNICELLULAR POLYPROPYLENE FOAM	8135	AS	3 Sep 75	
261	PPP-C-1842A(1) INT AMEND 2 CUSHIONING MATERIAL, PLASTIC, OPEN CELL (FOR PACKAGING APPLICATIONS)	8135	GL	29 Dec 75	
262	PPP-T-1835 TRAYS, PLASTIC, FOAM AND CLEAR	8135	GL	19 Oct 73	

Federal Test Method Standards (4 stds - 21 methods)

	FED TEST METHOD STD No. 101B CHG NOT 3 PRESERVATION, PACKAGING AND PACKING MATERIALS: TEST PROCEDURES	PACK	AS	25 Apr 75	
263	Method 2013 CREEP PROPERTIES OF PACKAGE CUSHIONING MATERIALS UNDER COMPRESSION, 15 Jan 69				
264	Method 2028 LOAD DEFLECTION CHARACTERISTICS OF RESILIENT CUSHIONING MATERIALS (STATIC INDENTATION METHOD), 15 Jan 69				
265	Method 4035 WATER ABSORPTION BY CUSHIONING MATERIALS, 15 Jan 69				
266	Method 4043 THERMAL CONDUCTIVITY OF CUSHIONING MATERIALS, 15 Jan 69				
	FED TEST METHOD STD No. 191 CHG NOT 5 TEXTILE TEST METHODS	8300	GL	17 July 74	
267	Method 5903.2 FLAME RESISTANCE OF CLOTH; VERTICAL (used for foam products also), 9 July 71				

Ref. No.		FSC Category/ Area	Preparing Activity	Issue Date	Coordination and QPL
268	FED TEST METHOD STD No. 406 PLASTICS: METHODS OF TESTING	9330	SH	5 Oct 61	

Note: There are 77 Methods in this Standard. None are known to be applicable only to cellular plastics, but quite probably some of these Methods can be used with cellular plastics. For this reason the Standard is listed.

	FED TEST METHOD STD No. 601 CHG NOT 6 RUBBER: SAMPLING AND TESTING	9320	MR	29 Aug 72	

269	Method 12001	CELLULAR RUBBER, GENERAL, 12 Apr 55
270	Method 12005	GEOMETRICAL MEASUREMENTS, CELLULAR RUBBER, GENERAL, 12 Apr 55
271	Method 12011	LENGTH, CELLULAR RUBBER, 12 Apr 55
272	Method 12021	WIDTH, CELLULAR RUBBER, 12 Apr 55
273	Method 12031	THICKNESS, CELLULAR RUBBER, 12 Apr 55
274	Method 12041	DIAMETER, CELLULAR RUBBER, 12 Apr 55
275	Method 12111	FLEXING ENDURANCE, CELLULAR RUBBER, 12 Apr 55
276	Method 12121	INDENTATION, CELLULAR RUBBER, 12 Apr 55
277	Method 12131	COMPRESSION SET, CELLULAR RUBBER, 12 Apr 55
278	Method 12141	COMPRESSION RESISTANCE, CELLULAR RUBBER, 12 Apr 55
279	Method 12151	COMPRESSION DEFLECTION, CELLULAR RUBBER, 12 Apr 55
280	Method 12211	AIR HEAT TEST, CELLULAR RUBBER, 12 Apr 55
281	Method 12231	AIR PRESSURE TEST, CELLULAR RUBBER, 12 Apr 55
282	Method 12311	OIL IMMERSION TEST, CELLULAR RUBBER, 12 Apr 55
283	Method 12411	WATER ABSORPTION, CELLULAR RUBBER, 12 Apr 55

U.S. Dept. of Commerce, National Bureau of Standards, Office of Engineering Standards, Washington, D.C. 20234 (3 stds)

Voluntary Product Standards*

284	PS 13-69	UNCORED SLAB URETHANE FOAM FOR BEDDING AND FURNITURE CUSHIONING, Dec 69
285	PS 63-75	LATEX FOAM MATTRESSES FOR HOSPITALS, Apr 75

Simplified Practice Recommendations*

286	R 2-62	BEDDING PRODUCTS AND COMPONENTS (MATTRESSES, SPRINGS, BEDSTEADS AND COTS), 1962

* These are really industry standards developed with the assistance of the National Bureau of Standards and issued by that agency.

APPENDIX

Federal Supply Classification (FSC) Groups and Classes and DoD Area Assignments[1]

[1] From Cataloging Handbook, H2-1, Federal Supply Classification, Part 1, Groups and Classes, January 1975, Defense Supply Agency

Group 13 Ammunition and Explosives
- FSC 1320 Ammunition, over 125 mm
- FSC 1338 Guided Missile and Space Vehicle Inert Propulsion Units, Solid Fuel; and Components
- FSC 1375 Demolition Materials

Group 16 Aircraft Components and Accessories
- FSC 1660 Aircraft Air Conditioning, Heating, and Pressurizing Equipment

Group 42 Fire Fighting, Rescue and Safety Equipment
- FSC 4220 Marine Lifesaving and Diving Equipment

Group 54 Prefabricated Structures and Scaffolding
- FSC 5410 Prefabricated and Portable Buildings (includes Prefabricated Panels)

Group 56 Construction and Building Materials
- FSC 5640 Wallboard, Building Paper, and Thermal Insulation Materials
- FSC 5680 Miscellaneous Construction Materials

Group 59 Electrical and Electronic Equipment Components
- FSC 5970 Electrical Insulators and Insulating Materials

Group 61 Electric Wire, and Power Distribution Equipment
- FSC 6145 Wire and Cable, Electrical

Group 65 Medical, Dental, and Veterinary Equipment and Supplies
- FSC 6575 Medical and Surgical Instruments, Equipment and Supplies

Group 71 Furniture
- FSC 7110 Office Furniture

Group 72 Household and Commercial Furnishings and Appliances
- FSC 7210 Household Furnishings
- FSC 7220 Floor Coverings

Group 75 Office Supplies and Devices
- FSC 7510 Office Supplies

Group 79 Cleaning Equipment and Supplies
FSC 7920 Brooms, Brushes, Mops and Sponges

Group 80 Brushes, Paints, Sealers, and Adhesives
FSC 8040 Adhesives

Group 81 Containers, Packaging, and Packing Supplies
FSC 8115 Boxes, Cartons and Crates
FSC 8135 Packaging and Packing Bulk Materials
FSC 8140 Ammunition and Nuclear Ordnance Boxes, Packages and Special Containers

Group 93 Nonmetallic Fabricated Materials
FSC 9320 Rubber Fabricated Materials
FSC 9330 Plastics Fabricated Materials

DoD Area Assignments (used in lieu of FSC Classification where an FSC class is not applicable)

MISC Miscellaneous
PACK Packaging

Preparing Activities[1]

[1] More detailed addresses, telephone numbers, etc. can be found in the DOD Standardization Directory, FSC Class and Area Assignments, SD-1, issued quarterly by the Naval Publications and Forms Center, 5801 Tabor Avenue, Philadelphia, PA 19120. Similar information, but without the telephone numbers, is available in the Department of Defense Index of Specifications and Standards (DODISS), Part II, Numerical Listing. The DODISS, published periodically, is available to private industry and Government civil agencies through the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Military agencies can obtain copies from the Naval Publications and Forms Center directly, or through military channels.

AS - Naval Air Systems Command, Washington, DC
AT - U.S. Army Tank Automotive Command, Warren, MI
DM - Defense Personnel Support Center, Directory of Medical Materiel, Philadelphia, PA
EC - Naval Electronic Systems Command, Washington, DC
FSS- General Services Administration (GSA), Federal Supply Service Washington, DC
GL - U.S. Army Natick Research and Development Command, (formerly Natick Laboratories), Natick, MA

ME - U.S. Army Mobility Equipment Research and Development Center, Ft. Belvoir, VA
MI - U.S. Army Missile Command, Redstone Arsenal, ALA
MR - U.S. Army Materials and Mechanics Research Center, Watertown, MA
MU - Frankford Arsenal, Philadelphia, PA
OS - Naval Sea Systems Command (Ordnance Systems), Washington, DC
PA - Picatinny Arsenal, Dover, NJ
SH - Naval Sea Systems Command (Naval Ship Engineering Center), Hyattsville, MD
SM - U.S. Army Packaging, Storage and Containerization Center, Tobyhanna Army Depot, Tobyhanna, PA
YD - Naval Facilities Engineering Command, Alexandria, VA
11 - Aeronautical Systems Division, Wright-Patterson Air Force Base, OH
69 - Directorate of Packaging, Air Force Logistics Command, Wright-Patterson Air Force Base, OH
70 - Ogden Air Logistics Center, Air Force Logistics Command, Hill Air Force Base, UT

Coordination and QPL

The symbol "L" means that the document has limited coordination, by one Service only. For example, in Ref. No. 176, the specification was prepared by the Naval Sea Systems Command, Naval Ship Engineering Center, for exclusive Navy use. It was not circulated to the Army, Air Force, or Civil Agencies for their comments and acceptance. Usually these limited coordination documents have symbols representing the preparing activity in parentheses immediately following the specification number. In this case, SHIPS is actually spelled out. In some cases, for Air Force limited coordination documents, the letters USAF are used. In others the official symbols (see Preparing Activities in this Appendix) are used.

The symbol "Q" means that a Qualified Products List of approved sources has been published. The symbol "NQ" means that such a list is planned but not yet issued.

SUBJECT INDEX

(in terms of Reference Numbers)

(Note: With a few exceptions, this index has been prepared only from the titles of the Standardization documents cited.)

PLASTEC Publications, Since 1968

(Complete list available on request)

REPORTS

R5D	*Directory in Plastics - Knowledgeable Government Personnel (Revised) by R.J. Valles and John Nardone, Feb 1975 (Price $20.00)*	*AD A008 340*
32	*The Weatherability of Polyolefins, by J.B. Titus, March 1968 (Price $6.00)*	*AD 672 513*
33	*Compatibility of Explosives with Polymers (II)(An Addendum to Picatinny Arsenal Technical Report 2595), by N.E. Beach and V.K. Canfield, April 1968 (Price $6.00)*	*AD 672 661*
34	*Survey of Plastics Sandwich Construction, by N.T. Baldanza, May 1968 (Price $6.00)*	*AD 673 713*
35	*Subject Index, Bibliography, and Code Description of Technical Conference Papers on Plastics: May 1967-May 1968, by J.B. Titus and A.E. Molzon, Aug 1968 (Price $6.00)*	*AD 676 189*
*36**	*A Bibliography of Ablative Composites and Polymers, by A.M. Shibley, July 1968*	*AD 855 720*
37	*Polyurethane Foams: Technology, Properties and Applications, by A.H. Landrock, Jan 1969 (Price $15.50)*	*AD 688 132*
R37A	*Ecological Disposal of Plastics with Emphasis on Foam-in-Place Polyurethane Foam, by A.H. Landrock, Aug 1973 (Price $10.00)*	*AD 771 342*
38	*Weatherability of Polystyrenes and Related Copolymers and Terpolymers, by J.B. Titus, July 1969 (Price $6.00)*	*AD 710 091*
39	*Subject Index, Bibliography, and Code Description of Technical Conference Papers on Plastics. 15 May 1968-8 May 1969, by J.B. Titus and A.E. Molzon, December 1969 (Price $8.00)*	*AD 707 246*
40	*Compatibility of Explosives with Polymers (III). An Addendum to Picatinny Arsenal TR 2595 and PLASTEC Report 33, by N.E. Beach and V.K. Canfield, January 1971 (Price $6.00)*	*AD 721 004*
R41	*Applications of Ionizing Radiations in Plastics and Polymer Technology, by A.F. Readdy, Mar 1971 (Price $12.00)*	*AD 725 940*
R42	*Solid-Phase Forming (Cold Forming) of Plastics, by J.B. Titus, Jan 1972 (Price $10.00)*	*AD 752 136*
R43	*Plastics Fabrication by Ultraviolet, Infrared, Induction, Dielectric and Microwave Radiation Methods, by A.F. Readdy, April 1972 (Price $11.00)*	*AD 756 214*
*R44**	*Plastic Materials for Cartridge Cases by A.M. Shibley, Jan 1973*	*AD 912 075L*
R45	*Reverse Osmosis Bibliography: Abstracted and Indexed, by J.B. Titus, June 1973 (Price $17.00)*	*AD 769 208*

NOTES

N6C	*Government Specifications and Standards for Plastics Covering Defense Engineering Materials and Applications (Revised, Final), by N.E. Beach, May 1973 (Price $3.00)*	*AD 771 608*
N9B	*Trade Designations of Plastics and Related Materials (Revised), by J.B. Titus, Oct 1974 (Price $13.00)*	*AD A001 856*
18	*The Coating of Aluminum with Plastics by the Fluidized-Bed and Electrostatic Powder Techniques, by A.H. Landrock, Feb 1968 (Price $6.00)*	*AD 666 224*
19	*Polymer Synthesis: A Survey of Government Contracts Since 1960, by A.E. Molzon, Jan 1968 (Price $6.00)*	*AD 666 758*
20	*Literature Survey on Thermal Degradation, Thermal Oxidation, and Thermal Analysis of High Polymers (III), by D.A. Teetsel and D.W. Levi, November 1969 (Price $10.00)*	*AD 706 811*
21	*Literature Search. Injection Molding Processing Parameters, by N.T. Baldanza, July 1969 (Price $3.00)*	*AD 703 530*
22	*Compatibility of Explosives with Polymers. A Guide to the Reactions Reported in Picatinny Arsenal Technical Report 2595, March 1959, by M.C. St. Cyr and N.E. Beach, October 1970 (Price $3.00)*	*AD 716 624*
N23	*Literature Survey on Thermal Degradation, Thermal Oxidation, and Thermal Analysis of High Polymers (IV), by E.C. Schramm and D.W. Levi, Jan 1972 (Price $12.00)*	*AD 759 530*
N24	*Environmentally Degradable Plastics A Review by J.B. Titus, Feb 1973 (Price $4.00)*	*AD 760 718*
*N25**	*Low Energy Impact Strength of Graphite/Epoxy Composites, An Initial Exploration, by J.A. Maciejczyk, Apr 1973*	*AD 912 224L*
N26	*Weldbonding in the United States An Annotated Bibliography and History, by R. Winans, A.M. Shibley and J.R. Hall, Dec 1974 (Price $6.00)*	*AD A008 048*
*N27** *(Part I)*	*Army Aircraft Structural Plastic Materials Testing and Data Compilation, Characterization Signatures of Commercial Prepregs for Composite Aerostructures, by L.R. Weiner, J.A. Maciejczyk and A.E. Slobodzinski, June 1975*	*AD B006 545L*
(Part II)	*Same as above, September 1975*	*AD B007 234L*
*N28**	*Review of Plastic Flooring for Explosive/Propellant Processing Areas of Army Ammunition Plants, by John Nardone (Mar 1976)*	*AD B011 790L*
N29	*Literature Survey on Thermal Degradation, Thermal Oxidation, and Thermal Analysis of High Polymers (V), by Alice Csete and D.W. Levi, Jan 1976 (Price $15.00)*	

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