MILITARY SPECIFICATION

GASKET MATERIAL, NON-METALLIC

This specification is approved for use by the U.S. Army Materials Technology Laboratory, within the Department of the Army, and is available for use by all Departments and Agencies of the Department of Defense.

1. SCOPE.

1.1 Scope. This specification covers gasket stock made from non-metallic materials and suitable for general automotive, aeronautical and other mechanical applications. This specification does not cover molded gaskets, rubber or plastic sheet gaskets which are covered by other specifications.

1.2 Classification. Gasket stocks shall be of the following types, dependent upon the nature of the principal fibrous or particulate reinforcing material:

Type 1 - Asbestos 1/
Type 2 - Cork
Type 3 - Cellulose
Type 4 - Fluorocarbon Polymer
Type 5 - Flexible graphite
Type 7 - Nonasbestos, tested as type 1
Type 9 - As specified 2/

1/ Type 1 is used for reference only (see sec. 1.2.1) Asbestos has been banned by the Government.

2/ On engineering drawings or other supplement to this classification system.

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Director, U.S. Army Laboratory Command, Materials Technology Laboratory, ATTN: SLCMT-MEE, Watertown, MA 02172-0001 by using the Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC N/A FSC 5330
DISTRIBUTION STATEMENT A Approved for public release; distribution unlimited.

1.2.1 Identification number for mechanical and physical properties. The mechanical and physical properties for the types of gasket materials covered by this specification shall be specified by a six digit number prefixed by the letter "F" (for example, F125400). (Note: The identification number may also be referred to as a line "call-out" number.) In addition to the six digits, identification numbers shall include suffix letters A through Z, when applicable, to specify the gasket characteristics for sealability, creep relaxation, adhesion, corrosion, tensile strength, volume weight and thickness changes in ASTM oils and other physical and mechanical properties required (for example, F125400B2M4). Identification numbers for types 1, 2, 3, 4, 5, 7 and 9 gasket materials shall be determined in accordance with tables 1 and 2 of ASTM F104, as specified (see 6.2 and 6.4).

Example: F125400B2E33M4

Letter indicating a gasket material
Asbestos
Beater process
Compressibility requirement 20 to 30%
Thickness increase in ASTM #3 oil, 15 to 30%
Weight increase in ASTM #3 oil - not specified
Weight increase in water - not specified
Creep relaxation, 15% maximum
20% weight, & 0-15% thickness increase in ASTM Fuel B
Tensile strength, 1000 psi minimum

F 1 2 5 4 0 0 B2 E33 M4

2. APPLICABLE DOCUMENTS

2.1 Government documents.

2.1.1 Specifications, standards, and handbooks. The following specifications, standards, and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation (see 6.2).

SPECIFICATIONS

FEDERAL

PPP-B-585 - Boxes, Wood, Wirebound
PPP-B-591 - Boxes, Shipping, Fiberboard, Wood Cleated
PPP-B-601 - Boxes, Wood Cleated Plywood
PPP-B-621 - Boxes, Wood, Nailed and Lock Corner
PPP-B-636 - Boxes, Shipping, Fiberboard
PPP-B-1055 - Barrier Material, Waterproofed, Flexible
PPP-T-76 - Tape, Packaging, Paper (for Carton Sealing)

MILITARY

MIL-L-10547 - Liners, Case, and Sheet, Overwrap; Water-Vaporproof, or Waterproof, Flexible
MIL-B-13239 - Barrier Material, Waterproofed, Flexible, All Temperatures, Heat Sealable

STANDARDS

MILITARY

MIL-STD-105 - Sampling Procedures and Tables for Inspection by Attributes
MIL-STD-129 - Marking for Shipment and Storage
MIL-STD-147 - Palletized Unit Loads
MIL-STD-177 - Rubber Products, Terms for Visible Defects of
MIL-STD-1190 - Minimum Guidelines for Level C Preservation, Packing and Marking

(Unless otherwise indicated, copies of federal and military specifications, standards, and handbooks are available from the Naval Publications and Forms Center, (ATTN: NPODS), 5801 Tabor Avenue, Philadphia, PA 19120-5099)

2.2 Non-Government publications. The following documents form a part of this specification to the extent specified herein. Unless otherwise specified, the issues of the documents which are DoD adopted are those listed in the issue of the DODISS cited in the solicitation. Unless otherwise specified, the issues of documents not listed in the DODISS are the issues of the documents cited in the solicitation (see 6.2).

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM D3951 - Practice for Commercial Packaging
ASTM F36 - Compressibility and Recovery of Gasket Materials
ASTM F37 - Sealability of Gasket Materials
ASTM F38 - Creep Relaxation of a Gasket Material
ASTM F104 - Classification System for Nonmetallic Gasket Materials
ASTM F146 - Fluid Resistance of Gasket Material
ASTM F147 - Flexibility of Non-Metallic Gasket Materials
ASTM F148 - Binder Durability of Cork Composition Gasket Materials
ASTM F152 - Tension Testing of Non-Metallic Gasket Materials
ASTM F433 - Evaluating Thermal Conducivity of Gasket Materials
ASTM F495 - Weight Loss of Gasket Material Upon Exposure to Elevated Temperatures
ASTM F607 - Adhesion of Gasket Materials to Metal Surfaces
ASTM G21 - Resistance of Synthetic Polymeric Materials to Fungi

(Application for copies should be addressed to the ASTM, 1916 Race Street, Philadelphia, Pennsylvania 19103.)

(Non-Government standards and other publications are normally available from the organizations that prepare or distribute the documents. These documents also may be available in or through libraries or other informational services.)

2.3 Order of precedence. In the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1 First article. When specified (see 6.2), a sample shall be subjected to first article inspection (see 6.3) in accordance with 4.2.1.

3.2 Material. Materials used in the manufacture of the gasket material shall be those necessary to produce gasket compositions conforming to the requirement of this specification.

3.3 Physical and mechanical properties. The physical and mechanical properties, such as flexibility, tensile strength, compressibility, thermal conductivity, for types 2, 3, 4, 5, 7 and 9 gasket materials shall be specified in accordance with 1.2.1 and the additional requirements specified herein and designated by suffix letters in the identification number.

3.3.1 Sealability. When specified (see 6.2), gasket material shall be subjected to the sealability test specified in 4.5. The rate of leakage, the test pressure and time required to perform the test shall be specified by the contracting officer. Identification numbers shall indicate sealability requirement by the suffix letter "A9".

3.3.2 Volume change in fluids. When specified (see 6.2, 6.3 and table VI), gasket material shall be subjected to one or all of the following liquids to determine the volume change: ASTM No. 1 oil, ASTM No. 3 oil, ASTM Fuel A and ASTM Reference Fuel B. The test shall be performed in accordance with 4.5. Identification numbers shall indicate volume change in fluids by the suffix letter "S9".

3.3.3 Ignition loss. When specified (see 6.2), type 7 gasket material shall be subjected to the ignition loss test specified in 4.5. The weight loss shall be no greater than 35% for type 7. Identification numbers shall indicate ignition loss requirement by suffix letter "Z".

3.3.4 Fungus resistance. Unless otherwise specified (see 6.2), all gasket material covered by this specification shall show no signs of fungi growth after being subjected to the test specified in 4.5.

3.4 Dimensional requirements. Gasket material shall be furnished in sheets (flat cuts) or in rolls as specified (see 6.2). All cut sheets and rolls shall be trimmed square on four sides. The edges of the gaskets shall be smooth.

3.4.1 Length and width. The length and width of cut sheets and roll gaskets shall be as specified (see 6.2).

3.4.1.1 Tolerances. Unless otherwise specified (see 6.2), tolerances for width and length of cut sheets and rolls shall be as follows:

Dimension in inches	Tolerance in inches
Cut sheets:	
Less than 36 by 36	Plus or minus 0.25
36 by 36	Minus 0.25 plus 0.50
Over 36 by 36	Plus or minus 0.1875
Rolls:	
Width under 18	Plus or minus 0.125
Width over 18	Plus or minus 0.25
Length as specified	Minus 0, plus 5 percent of length specified
Millimeter equivalents:	
36" = 914.4mm	0.1875 = 4.76mm
18" = 457.2mm	0.25 = 6.35mm
0.125 = 3.18mm	0.5 = 12.7mm

3.4.2 Fabricated gaskets. Fabricated gaskets die cut, shall be of the shape and dimensions specified (see 6.2).

3.4.3 Thickness types 2, 3, 4, 5, 7 and 9 gaskets. The thickness of types 2, 3, 4, 5, 7 and 9 gaskets shall be specified (see 6.2).

3.4.3.1 Thickness tolerances. Unless otherwise specified (see 6.2), thickness tolerances shall be in accordance with table 3 of ASTM F104 for F-identification numbers.

3.5 Identification marking. Unless otherwise specified (see 6.2), sheets, rolls, and solid form-in-place materials shall be legibly marked with a fuel-oil resistant lacquer, ink or dye to show the following: Manufacturer's identification, F-identification number, this specification number and date of manufacture. In cases where material can not be marked, because of size or form-in-place material, the material container shall be marked. Fabricated gaskets and gasket material less than 0.010 inch in thickness do not require identification marking.

3.6 Workmanship. Gaskets covered by this specification shall be uniform in construction and appearance. The finished stock shall be free from porous areas, weak sections, bubbles, separation, foreign matter, cracks extending through the body, voids extending into the body, sponginess or porosity, delamination, trapped air on critical surfaces, and other defects affecting serviceability.

NOTE: For solid form-in-place materials, the cord shall be uniform in construction and appearance and free from weak sections, adhesives separation, foreign matter, cracks extending through the surface, voids extending into the body and other defects affecting serviceability.

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the contractor is responsible for the performance of all inspection requirements (examinations and tests) as specified herein. Except as otherwise specified in the contract or purchase order, the contractor may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in this specification where such inspections are deemed necessary to ensure supplies and services conform to prescribed requirements.

4.1.1 Responsibility for compliance. All items shall meet all requirements of sections 3 and 5. The inspection set forth in this specification shall become a part of the contractor's overall inspection system or quality program. The absence of any inspection requirements in the specification shall not relieve the contractor of the responsibility of ensuring that all products or supplies submitted to the Government for acceptance comply with all requirements of the contract. Sampling inspection, as part of manufacturing operations, is an acceptable practice to ascertain conformance to requirements, however, this does not authorize submission of known defective material, either indicated or actual, nor does it commit the Government to accept defective material.

4.2 Classification of inspections. The inspection requirements specified herein are classified as follows:

(a) First article inspection (see 4.2.1).
(b) Quality conformance inspection (see 4.2.2)

4.2.1 First article inspection. First article inspection shall be performed on one unit when a first article sample is required (see 3.1). This inspection shall include the examination of 4.4 and the tests of 4.5. Failure of the first article to pass the examination or any of the tests shall be cause for rejection.

4.2.2 Quality conformance inspection. Quality conformance inspection shall be performed on the sample units in accordance with 4.3.3 and 4.3.4. The inspection shall include the examination of 4.4 and the tests of 4.5.

4.3 Sampling.

4.3.1 Lot. Unless otherwise specified (see 6.2), all gasket material of the same type and identification number, manufactured in the same identifiable production period, by the same process under the same operating conditions, and submitted to the Government at one time, shall be considered a lot for the purpose of acceptance.

4.3.2 Unit of product.

4.3.2.1 Sheet material. A unit of product shall be one sheet of gasket material of the size and thickness specified (see 6.2).

4.3.2.2 Roll material. A unit of product shall be approximately one yard (one metre) of gasket material of the width specified for visual and dimensional examination.

4.3.3 Sampling for examination. A random sample of gaskets shall be selected from each lot offered to the Government in accordance with MIL-STD-105 at inspection level II. In terms of defects per 100 units, the acceptable quality level shall be 1 for major defects.

4.3.4 Sampling for tests. A random sample of gasket sheets or rolls shall be selected from each lot offered to the Government in accordance with MIL-STD-105 at inspection level S-4. From each roll selected, two product units shall be taken from different locations.

4.4 Examination. Each unit, selected in accordance with 4.3.3 shall be examined to verify compliance with this specification. Examination shall be conducted as specified in table I.

4.5 Tests. Each sample unit, selected in accordance with 4.3.4 shall be subjected to the applicable tests specified in table II as dictated by the identification number specified (see 1.2.1, 3.3 and 6.2). Gasket material not meeting the applicable tests specified shall be cause for rejecting the lot.

TABLE I. Classification of defects.[1/]

Categories	Defects	Requirement paragraph	Method of inspection
Major			
101	Gasket material not as specified	1.2, 1.2.1, 3.2	Visual
102	Length and width not as specified	3.4.1	Scale
103	Thickness not as specified	3.4.3	Dial micrometer
104	Crack extending through body	3.6	Visual
105	Void extending into body	3.6	Visual
106	Blister extending through body	3.6	Visual
107	Sponginess or porosity	3.6	Visual
108	Trapped air on critical surface	3.6	Visual
109	Delamination	3.6	Visual
Minor			
201	Poor dispersion	3.6	Visual
202	Flow mark	3.6	Visual
203	Wrong marking	3.5	Visual

[1/] Visual defects specified shall be as defined in MIL-STD-177.

TABLE II. Physical and mechanical characteristics.

Physical and mechanical characteristics	ASTM test method
Sample conditioning	F 104
Compressibility	F 36
Tensile strength	F 152
Resistance to exposure in ASTM No. 3 oil	F 146
Volume change - 70 hrs. at 212°F (100°C)	
Weight increase - 22 hrs. at 70-85°F (21.1-29.4°C)	
5 hrs. at 302°F (150°C)	
Thickness change - 5 hrs. at 302°F (150°C)	
Resistance to exposure in ASTM Fuel B	F 146
Weight increase - 22 hrs. at 70-85°F (21.1-29.4°C)	
5 hrs. at 70-85°F (21.1-29.4°C)	
Thickness change - 22 hrs. at 70-85°F (21.1-29.4°C)	
5 hrs. at 70-85°F (21.1-29.4°C)	
Resistance to exposure in ASTM No. 1 oil	F 146
Volume change - 70 hrs. at 70-85°F (21.1-29.4°C)	
Resistance to exposure in ASTM Fuel A	F 146
Volume change - 22 hrs. at 70-85°F (21.1-29.4°C)	
Resistance to exposure in distilled water	F 146
Weight increase - 22 hrs. at 70-85°F (21.1-29.4°C)	
Thickness change - 22 hrs. at 70-85°F (21.1-29.4°C)	
Sealability	F 37
Creep relaxation	F 38
Adhesion to metal surfaces	F 607
Flotation	F 104
Weight Loss on ignition	F 495
Flexibility	F 147
Binder durability	F 148
Thermal conductivity	F 433
Fungus resistance	G 21

5. PACKAGING

5.1 Application. The requirements of section 5 apply only to purchase by or direct shipment to the Government.

5.1.1 Preservation. Preservation shall be levels A, C or commercial, as specified (see 6.2).

5.1.2 Level A unit packing. The gasket material shall be properly segregated as to identification number (call-out numbers) when packaged for shipment. Whenever applicable the gasket material shall be interleaved or otherwise protected with suitable material to prevent adherence. Material in

rolls, or sheets in stacks shall be wrapped in waterproof barrier material conforming to MIL-B-13239 or PPP-B-1055 and sealed with tape conforming to PPP-T-76.

5.1.3 Commercial unit packing. Gasket material shall be packaged in accordance with ASTM D3951.

5.1.4 Level C unit packing. For Army use only, preservation and unit packing shall be accomplished in accordance with MIL-STD-1190(SM).

5.2 Packing. Packing shall be level A, B, or commercial as specified (see 6.2).

5.2.1 Level A. The gasket material shall be packed in overseas type boxes conforming to any of the following specifications: PPP-B-585 (style 2 or 3), class 3), PPP-B-591, PPP-B-601, PPP-B-621 (style 4, class 2), or PPP-B-636 (WWVR). Gross weight of wood and wood cleated boxes shall not exceed 91.72 kg (200 lbs), fiberboard boxes shall not exceed the weight limitation of the box specification. Cushioning shall be applied as required to protect the gasket material. Box closures and strapping shall conform to the box specification and appendix thereto. When specified, containers shall be lined with sealed case liners conforming to MIL-L-10547.

5.2.2 Level B. Gasket material shall be packed as specified in 5.2.1 except that the boxes shall be domestic type and case liners will not be required. Fiber boxes conforming to PPP-B-636 shall be weather resistant.

5.2.3 Level C. Packing shall be in accordance with ASTM D3951.

5.2.4 Level C. For Army use only, packing shall be accomplished in accordance with MIL-STD-1190(SM).

5.3 Marking.

5.3.1 Material identification. Each package and each container shall be clearly marked with the applicable material identification call-out number.

5.3.2 Marking for shipment. In addition to any special marking required in the contract (see 6.2), shipping containers shall be marked in accordance with MIL-STD-129.

5.4 Palletization. When specified in the contract or purchase order (see 6.2), shipping containers shall be palletized in accordance with MIL-STD-147.

6. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

6.1 Intended use. Suggested applications for the types of gaskets covered by this specification are described in MIL-HDBK-212.

6.2 Ordering data. Procurement documents should specify the following:

(a) Title, number and date of this specification.
(b) Identification call-out number required, including suffix letter codes for sealability, volume change in fluids, ignition loss as applicable (see 1.2.1, 3.3 thru 3.3.3).
(c) If first article is required (see 3.1).
(d) If fungus resistance is not required (see 3.3.4).
(e) If gasket material is furnished in sheets (flat cuts) or in rolls (see 3.4).
(f) Length, width, and thickness required (see 3.4.1 and 3.4.3).
(g) If different tolerances are required (see 3.4.1.1 and 3.4.3.1).
(h) Shape and dimension of die cut fabricated gaskets (see 3.4.2).
(i) If different identification marking is required (see 3.5).
(j) Lot sampling if different from 4.3.1.
(k) Size and thickness of gasket sheet representing unit of product (see 4.3.2.1).
(l) Level of packaging and packing required (see 5.1 and 5.2).
(m) If special marking is required (see 5.3.2).
(n) If shipping containers shall be palletized (see 5.4).

6.3 First article inspection. When first article inspection is required, appropriate provisions should be included in the contract to allow the contracting officer to waive completely or in part the first article inspection and reduce the bid price accordingly if the successful bidder has previously performed any or all of the first article tests in recent procurement. When contract allows for the waiver of first article inspection, the contract should require that successful bidder seeking such waiver submit satisfactory evidence, including test and inspection reports that the inspection has been performed, and additional information such as contract identification, the procuring activity, the date, and other pertinent data deemed necessary by the contracting officer.

6.4 Cross reference. The following tables III, IV, and V, show the conversion of the P-identification numbers covered by MIL-G-12803A and the applicable F-identification numbers covered by this specification and ASTM F 104. The F-identification numbers in tables III, IV, and V are representative of the gasket material commercially available. However, the tables do not include all gasket materials currently available. Cross reference tables are not shown for types 4, 5, 7 and 9 gasket material. These types of material were not used for gaskets when P and G numbers were incorporated.

6.5 Subject term (key word) listing.

Asbestos	Fluorocarbon polymer
Cellulose	Fungus resistance
Cork	Gasket
Flexible graphite	Ignition loss

Custodian:
Army - MR

Review activities:
Army - MI, GL, SM, AT

User activity:
Army - ME

Preparing activity:
Army - MR

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TABLE III. F-Identification numbers for type 1 gasket material.

P-number of MIL-G-12803A	Former "G" number	Substitute F-numbers in accordance with ASTM F104												
										1/				2/
P 1141A	1122-1	F	1	1	2	1	0	0	E	3	3	M	6	
P 1151A	1123-1	F	1	1	2	4	0	0	E	4	5	M	6	
P 1161A	1111-1	F	1	1	2	6	0	0	E	5	6	M	6	
P 1161B	1111-2	F	1	1	2	7	0	0	E	6	7	M	6	
P 1162A	111-2	F	1	1	4	6	0	0	E	5	6	M	5	
P 1241A	-	F	1	2	3	2	0	0	E	4	3	M	4	
P 1241B	-	F	1	2	4	2	0	0	E	4	2	M	4	
P 1242A	-	F	1	2	6	2	0	0	E	5	2	M	5	
P 1242C	-	F	1	2	6	2	0	0	E	6	3	M	4	
P 1242D	-	F	1	2	5	2	0	0	E	5	3	M	6	
P 1243A	1422-2	F	1	2	7	2	0	0	E	6	1	M	3	
P 1251A	1423-1	F	1	2	3	2	0	0	E	4	3	M	6	
P 1252A	1423-2	F	1	2	5	5	0	0	E	6	4	M	4	
P 1253A	1423-3	F	1	2	7	1	0	0	E	6	3	M	4	
P 1261A	-	F	1	2	4	3	0	0	E	6	2	M	4	
P 1262B	-	F	1	2	6	5	0	0	E	7	3	M	4	
P 1301A	4131	F	1	3	2	0	0	0	E	0	0	M	1	Z
P 1302A	4111	F	1	3	4	0	0	0	E	0	0	M	1	Z

Notes: The following requirements shall be specified in contract or purchase order:

1/Refer to ASTM F104 for definition and interpretation of E suffix numbers.

2/Weight loss after ignition shall be no greater than 20 percent.

TABLE IV. F-Identification numbers for type 2 gasket material.

P-number of MIL-G-12803A	Former "G" number	Substitute F-numbers in accordance with ASTM F104										
											1/	
P 2116A	2114	F	2	1	3	0	0	0	M	2	R	
P 2117A	2113	F	2	1	4	0	0	0	M	2	R	
P 2117B	2112	F	2	1	5	0	0	0	M	1	R	
P 2118A	2111	F	2	1	7	0	0	0	M	1	R	
P 2126A	2214	F	2	1	3	0	0	0	M	2	R	
P 2127A	2213	F	2	1	4	0	0	0	M	1	R	
P 2127B	2212	F	2	1	5	0	0	0	M	1	R	
P 2128A	2211	F	2	1	7	0	0	0	M	1	R	
											2/	
P 2236A	1221-3	F	2	2	6	0	0	0	M	2	S	9
P 2243A	1222-2	F	2	2	4	0	0	0	M	2	S	9
P 2245A	1222-3	F	2	2	6	0	0	0	M	2	S	9
P 2245B	-	F	2	2	8	0	0	0	M	2	S	9
P 2246A	1222-4	F	2	2	7	0	0	0	M	2	S	9
P 2254A	1223-2	F	2	2	4	0	0	0	M	2	S	9
P 2255A	1223-3	F	2	2	6	0	0	0	M	2	S	9
P 2255B	-	F	2	2	8	0	0	0	M	1	S	9
P 2256A	1223-4	F	2	2	7	0	0	0	M	2	S	9
P 2265A	1211-3	F	2	2	6	0	0	0	M	1	S	9
P 2268A	1211-5	F	2	2	8	0	0	0	M	1	S	9

1/ Gasket stock shall show no disintegration when subjected to the following conditions:

a. Three hours in boiling water.
b. One-half hour in boiling hydrochloric acid (35% concentration).
c. Two hours in ASTM Oil No. 1 at 100°C (212°F).

2/For volume change requirement (see table VI).

TABLE V. F-Identification numbers for type 3 gasket material.

P-number of MIL-G-12803A	Former "G" number	Substitute F-numbers in accordance with ASTM F104								
P 3002A	3111	F	3	1	3	0	0	0	M	5
P 3102A	3141	F	3	1	5	0	0	0	M	3
P 3200A	3261 & 3262	F	3	1	1	0	0	0	M	9
P 3301A	3151	F	3	1	2	0	0	0	M	7
P 3302C	3122	F	3	1	4	0	0	0	M	5
P 3313B	3212	F	3	2	6	1	2	8	M	6
P 3341A	-	F	3	3	2	1	2	8	M	8
P 3341D	-	F	3	3	2	1	5	5	M	7
P 3342C	-	F	3	3	4	1	3	4	M	7
P 3342F	-	F	3	3	4	4	7	7	M	5
P 3342G	3232-3	F	3	3	5	1	6	7	M	5
P 3345A	3232-6	F	3	3	8	1	7	6	M	3
P 3353A	-	F	3	3	7	5	7	7	M	5
P 3353B	-	F	3	3	7	5	7	6	M	6
P 3354A	3233-5A	F	3	3	5	1	7	6	M	3
P 3365A	3234-6B	F	3	3	8	1	9	7	M	3
P 3413A	3221	F	3	2	6	1	2	7	M	5
P 3415A	3222	F	3	2	8	1	4	8	M	4
P 3421A	3223	F	3	9	3	1	4	4	M	5

TABLE V. F-Identification numbers for type 3 gasket material (Continued).

P-number of MIL-G-12803A	Former "G" number	Substitute F-numbers in accordance with ASTM F104								
P 3423A	-	F	3	9	6	1	4	3	M	4
P 3441A	-	F	3	3	2	2	4	4	M	6
P 3442A	-	F	3	3	3	1	4	6	M	7
P 3443B	3242-2	F	3	3	6	1	6	4	M	4
P 3443C	-	F	3	3	6	1	7	6	M	4
P 3444A	3242-3	F	3	3	7	1	7	6	M	3
P 3464A	3243-3	F	3	3	7	4	9	7	M	3
P 3553A	3233-3	F	No replacement 1/							
P 3561A	3234-2	F	No replacement 1/							
P 3562A	3234-3	F	No replacement 1/							

1/Item no longer manufactured.

TABLE VI. Volume change requirements for type 2 gaskets after oil immersi

Type 2 gaskets	Volume change after aging 70 hrs at 100°C (212°F) in ASTM #1 Oil	Volume change after aging 70 hrs at 100°C (212°F) in ASTM #3 Oil	Volume change after aging 22 hrs at 21.1 to 29.4°C (70 to 85°F) in ASTM fuel B
P 2236A	-5 to +5	0 to +10	-5 to +5
P 2243A	-5 to +10	-2 to +15	-2 to +10
P 2245A	-5 to +10	-2 to +15	-2 to +10
P 2246A	-5 to +10	-2 to +15	-2 to +10
P 2254A	-2 to +20	+15 to +50	0 to +15
P 2255A	-2 to +20	+15 to +50	0 to +15
P 2256A	-2 to +20	+15 to +50	0 to +15

STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

1. DOCUMENT NUMBER	2. DOCUMENT TITLE
IL-G-12803C(MR)	GASKET MATERIAL, NON-METALLIC

3a. NAME OF SUBMITTING ORGANIZATION	4. TYPE OF ORGANIZATION (Mark one)
	☐ VENDOR
b. ADDRESS (Street, City, State, ZIP Code)	☐ USER
	☐ MANUFACTURER
	☐ OTHER (Specify) _____

5. PROBLEM AREAS

a. Paragraph Number and Wording:

b. Recommended Wording:

c. Reason/Rationale for Recommendation

6. REMARKS

7a. NAME OF SUBMITTER (Last, First, MI) — Optional	b. WORK TELEPHONE NUMBER (Include Area Code) — Optional
c. MAILING ADDRESS (Street, City, State, ZIP Code) — Optional	8. DATE OF SUBMISSION (YYMMDD)

DD FORM 82 MAR 1426 PREVIOUS EDITION IS OBSOLETE.