PPP-C-1797 – Cushioning Material, Resilient, Low Density, Unicellular, Polypropylene Foam

Subject/Scope:

This specification covers a low density, resilient, unicellular (closed cell) polypropylene foam material for use in cushioning and packing applications..

Keywords:

Material, inspection, roll, specimen, sample, specification, requirement, defect, federal, quality, government, cushioning, mil, density, classification, polypropylene, test, container, surface, material, military, contractor, tear, marking, standard, foam, temperature, method, pressure, electrostatic, packing, properties, PSI, protection, compression, preservation, DOD

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Text in blue boxes such as this one is instructional and is intended to assist you in understanding the document.

Text in red boxes such as this explains changes made to the document by The Wooden Crates Organization.

Red text has been added to the document or modifies the document since its final version was officially published.

Soft Conversion of Imperial to Metric

Conversions, when made, consider materials that are available in metric or imperial sizes rather than converting sizes exactly. For example: Panelboard (plywood) in the US is typically 4 feet X 8 feet (1220 x 2440 mm) while panelboard in metric countries is typically 1200 X 2400 mm. Since the standard was developed based on readily available materials these variations in material sizes could not have been practically considered.

The content of the document below has not been modified.

PPP-C-1797A
1 September 1982
SUPERSEDING
PPP-C-1797
26 July 1972

FEDERAL SPECIFICATION

CUSHIONING MATERIAL, RESILIENT, LOW DENSITY, UNICELLULAR, POLYPROPYLENE FOAM

This specification was approved by the Commissioner, Federal Supply Service, General Services Administration, for use of all Federal agencies.

1. SCOPE AND CLASSIFICATION

1.1 Scope. This specification covers a low density, resilient, unicellular (closed cell) polypropylene foam material for use in cushioning and packing applications. It is useful throughout a temperature range from -65°F (-54°C) to 160°F (71°C) (see 6.1).

1.2 Classification. Polypropylene foam cushioning material shall be of the following types, as specified (see 6.1):

Type I - For general cushioning applications

Type II - For electrostatic protective cushioning applications

2. APPLICABLE DOCUMENTS

2.1 Government publications. The following documents, of the issues in effect on date of invitation for bids or request for proposal, form a part of this specification to the extent specified herein.

Federal Specifications

L-P-378	Plastic Sheet and Strip, Thin Gauge, Polyolefin
UU-P-268	Paper, Kraft, Wrapping
PPP-B-601	Boxes, Wood, Cleated Plywood
PPP-B-636	Box, Shipping, Fiberboard
PPP-B-640	Box, Fiberboard, Corrugated, Triple-Wall

Federal Standards

FED-STD-101	Test Procedures for Packaging Materials
FED-STD-123	Marking for Shipment (Civil Agencies)

(Activities outside the Federal Government may obtain copies of Federal specifications, standards, and commercial item descriptions as outlined under General Information in the Index of Federal Specifications, Standards and Commercial Item Descriptions. The Index, which includes cumulative bimonthly supplements as issued, is for sale on a subscription basis by the Superintendent of Documents, U. S. Government Printing Office, Washington, DC 20402.

(Single copies of this specification, and other Federal specifications and commercial item descriptions required by activities outside the Federal Government for bidding purposes are available without charge from General Services Administration Business Service Centers in Boston, MA; New York, NY; Philadelphia, PA; Washington, DC; Atlanta, GA; Chicago, IL; Kansas City, MO; Fort Worth, TX; Houston, TX; Denver, CO; San Francisco, CA; Los Angeles, CA; and Seattle, WA.

(Federal Government activities may obtain copies of Federal standardization documents and the Index of Federal Specifications, Standards and Commercial Item Descriptions from established distribution points in their agencies.)

Military Specifications

MIL-B-22191	Barrier Material, Transparent, Flexible, Heat Sealable

Military Standards

MIL-STD-105	Sampling Procedures and Tables for Inspection by Attributes
MIL-STD-129	Marking for Shipment and Storage

(Copies of military specifications and standards required by contractors in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.)

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

National Motor Freight Classification

(Application for copies should be addressed to the American Trucking Association, Inc., Traffic Department, 1616 P Street, N.W., Washington, DC 20036.)

Uniform Freight Classification

(Application for copies should be addressed to the Uniform Classification Committee, Room 1106, 222 South Riverside Plaza, Chicago, IL 60606.)

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

3. REQUIREMENTS

3.1 First article inspection. When specified, a sample shall be subjected to first article inspection (see 4.3 and 6.2).

3.2 Materials. The cushioning material shall be made from low density, resilient, unicellular (closed cell) polypropylene foam material and by such processes as to assure compliance with this specification.

3.2.1 Certification. When specified (see 6.2), the contractor shall submit certification that the material does not support active mold growth, has not been treated with fungicide or other toxic materials, and the blowing agent is nonflammable and non-explosive.

3.2.2 Recovered material. Recovered materials may be used to the maximum extent practicable consonant with the other requirements of this specification.

3.3 Form. The cushioning material shall be furnished in rolls, tear perforated rolls, or flat cuts, as specified (see 6.2).

3.3.1 Dimensions and tolerances.

3.3.1.1 Rolls. Unless otherwise specified, sizes of rolls shall be as follows (see 6.2):

Standard Roll	Thickness (inches) 1/				
	1/16(0.062)	3/32(0.093)	1/8(0.125)	3/16(0.187)	1/4(0.250)
Length, feet 2/	900	600	450	300	225
Width, inches 3/ 4/	72	72	72	72	72

1/ Thickness shall be not less than 95 percent of that specified. The 1/8, 3/16 and 1/4 inch material may be sheets spot bonded to provide the necessary thickness.

2/ Tolerance on length shall be -1 to +5 percent or ±1/2 inch (whichever is the larger) of the specified length.

3/ Widths from three inches up to standard roll widths may be obtained when specified (see 6.2).

4/ Tolerance on width shall be ±3 percent or ±1/4 inch (whichever is the larger).

3.3.1.2 Tear perforated rolls. The material shall be perforated across the width of the rolls at any of the intervals specified below (see 6.2):

Material Thickness (inches)	Intervals between parallel rows of perforations (inches) 1/
1/16	6, 12, 18, 24, or 36
3/32	6, 12, 18, 24, or 36
1/8	6, 12, 18, 24, or 36
3/16	12, 24, or 36
1/4	12, 24, or 36

1/ When specified, perforations may be obtained at other special intervals (see 6.2).

3.3.1.3 Flat cuts. Flat cuts shall be as specified in contract or order up to the limit of roll widths above with the applicable tolerances.

3.4 Physical properties. When tested as specified in Section 4, the material shall comply with the requirements indicated in Table I.

TABLE I. Physical properties.

Properties	Requirements	Paragraph references
Density (lbs/ft^3)	0.5 - 1.1	4.6.3.2
Dustiness (percent)	0.5 max.	4.6.3.3
Blocking resistance	Surfaces shall be easily separated with no evidence of delamination or rupture	4.6.3.4
Abrasiveness	No visible scratches	4.6.3.5
Compression set (percent)	15 max.	4.6.3.6
Contact corrosivity	No corrosion	4.6.3.7
Dimensional stability (percent)	4.0 max. MD 8.0 max. TD	4.6.3.8
High and low temperature application	No cracks or tears	4.6.3.9
Water absorption (lbs/ft^2)	0.01 max.	4.6.3.10
Electrostatic properties (Type II only)	Decay rate shall not exceed 2.0 seconds	4.6.3.11

3.5 Workmanship. The cushioning material shall be manufactured in a manner that will produce the high quality material necessary to meet the requirements of this specification. The finished product shall be uniform and free from defects that could adversely affect its intended use.

3.6 Color. Type I cushioning material shall be colorless. Type II material shall be tinted (any color except yellow) for identification.

3.7 Identification of material. Each roll or package of flat cuts shall include a tag, label or sheet containing the following information: specification number, type, manufacturer's name, manufacturer's designation, month and year of manufacture, and lot number. Letters and figures shall be clear, legible and a minimum of one eighth inch high. In addition, the identification medium for Type II material shall also include the word "ANTI-STAT."

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract, the contractor is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract, 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 the specification where such inspections are deemed necessary to assure that supplies and services conform to prescribed requirements.

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

a. First article inspection (see 4.3).

b. Quality conformance inspection (see 4.4).

4.3 First article inspection. The first article inspection shall consist of examination and tests for all of the requirements of this specification. The inspection shall be performed by the first article inspection laboratory designated by the contracting officer (see 6.2). When specified, first article inspection shall be conducted by the contractor in the presence of a Government representative designated by the contracting officer. Approval of the first article inspection sample does not preclude the requirements for performing the quality conformance inspection. First article inspection may be waived when the acquiring activity or contract administration activity has data or other evidence to indicate that prior successful first article inspection has been conducted.

4.3.1 First article samples. When specified by the contracting officer (see 6.2), the contractor shall submit a first article sample of sufficient material to conduct all tests required by this specification. The sample shall be produced by the contractor using the same production processes, procedures, and equipment used in fulfilling the contract. Prior to submission the contractor shall inspect the sample to assure that it conforms to the requirements of the contract and shall submit a record of this inspection. A first article sample shall be submitted, as directed by the contracting officer, wherever a change occurs in the

manufacturing process or material used such as to significantly affect product uniformity or performance as determined by the Government. Failure of the first article sample to meet all the requirements of the specification shall be cause for rejection.

4.4 Quality conformance inspections. Quality conformance inspections shall consist of examinations listed in 4.5 and tests listed in 4.4.1. Unless otherwise specified, the testing inspection of 4.4.1 shall be performed in accordance with MIL-STD-105 at an AQL of 4.0 defects per 100 units.

4.4.1 Quality conformance testing. Quality conformance tests shall consist of the following:

Tests	Reference paragraph
Thickness	4.6.3.1
Density	4.6.3.2
Dustiness	4.6.3.3
Abrasiveness	4.6.3.5

4.4.2 Inspection lot. A quality conformance inspection test lot shall consist of either 125 rolls of material or all material manufactured by the same process from the same components during one production run, whichever is the lesser.

4.4.3 Sampling. The sample unit for quality conformance testing shall be one roll or equivalent square yardage of flat cuts. Sufficient material shall be withdrawn from each roll or package of flat cuts to conduct quality conformance tests. The number of sample units for quality conformance testing shall be as follows:

Lot size in rolls	Sample units
125 or less	1
126 to 375	2
376 to 750	3
751 to 1500	4

4.5 End item examination. Unless otherwise specified by the acquiring activity, examination of the end item shall be in accordance with the list of defects and Acceptable Quality Levels (AQLs) set forth in 4.5.1, 4.5.2 and 4.5.3. The Government reserves the right to require examination for any defect prohibited in Section 3 or in the contract or purchase order even though it is not listed below, and to classify such defects in accordance with the definitions contained in MIL-STD-105. Facilities shall be made available to the Quality Assurance Representative for conducting the examinations prescribed herein.

4.5.1 Examination of the end item for defects in appearance and workmanship. Examinations shall be in accordance with MIL-STD-105 with an inspection level of S-3 and AQL of 4.0 defects per 100 units. The sample unit for this examination shall be one square yard or equivalent square yardage of flat cuts. Sufficient rolls shall be selected at random so that by examining approximately 10 yards per roll, the required sample yardage will be obtained. For examination of flat cuts, samples shall be scored only once for each occurrence within a square yard.

EXAMINE	DEFECTS
Form	Not rolls, not tear perforated rolls or not flat cuts as specified.
Cleanness	Not clean, presence of foreign matter (does not apply to outer convolution of roll).
Workmanship	Cuts or splits. Perforated rolls will not tear uniformly in the transverse direction of the roll.
Construction	Not uniform - cracks, folds, foreign matter.
Identification of material	Markings incomplete. Markings not legible. Markings less than one eighth inch high. Type II material not tinted.

NOTE: Spot bonding marks on 1/8, 3/16 and 1/4 inch material are not defects.

4.5.2 Examination of the end item for defects related to the roll or package of flat cuts. Examinations shall be in accordance with MIL-STD-105 with an inspection level of S-3 and an AQL of 4.0 defects per 100 units. The sample unit for this examination shall be one roll or one package of flat cuts.

EXAMINE	DEFECTS
Unwinding of rolls	When unwound, material sticks together to the extent that unrolling causes tearing or injury to surfaces.
	Material badly telescoped.
	Roll crushed. Core crushed.
Roll, tear perforated roll, or flat cut width	More or less than specified width by 3 percent or 1/4 inch (whichever is the larger).

EXAMINE	DEFECTS
Flat cut length or length of perforated section	More than specified length by 5 percent or 1/2 inch (whichever is the larger).
	Less than specified length by one percent or 1/2 inch (whichever is the larger).
Roll length	More than specified length by 5 percent or 1/2 inch (whichever is larger).
	Less than specified length by one percent or 1/2 inch (whichever is larger).

4.5.3 Examination of preparation for delivery. Examinations shall be in accordance with MIL-STD-105 with an inspection level of S-3 and an AQL of 4.0 defects per 100 units. The lot size shall be expressed in units of shipping containers (1 container per roll; and bundle of flat cuts), and the sample unit for this examination shall be one shipping container.

EXAMINE	DEFECTS
Preservation (as applicable)	Not level specified; not in accordance with contract requirements.
	Flat cuts not wrapped in bundles as specified.
	Packaging material not as specified; closures not accomplished by required materials.
Packing (as applicable)	Not level specified; not in accordance with contract requirements.
	Rolls not packed in containers as specified.
	Container materials not as specified; closures not accomplished by specified or required methods or materials.
Packaging Markings	Interior or exterior markings (as applicable) illegible, incorrect, omitted, or not in accordance with requirements.

4.5.4 Source of material used for examination. The same rolls or packages of flat cuts shall be used for examinations under 4.5.1 and 4.5.2.

4.6 Test methods.

4.6.1 Test specimens. Three specimens shall be taken from each sample to be tested. Tests shall be run in triplicate and the average value where applicable shall be reported.

4.6.2 Specimen conditioning. The specimens selected for testing shall be conditioned for a minimum of 24 hours at 73 $\pm 3.5^{\circ}$F. For referee purposes, the conditions shall be 73 $\pm 3.5^{\circ}$F and 50 ± 5 percent relative humidity for a minimum of 24 hours.

4.6.3 Tests.

4.6.3.1 Thickness. Thickness shall be measured according to FED-STD-101, Method 1003 using a dial micrometer on a stand. Specimen size shall be 5 inches by 5 inches. Three specimens shall be cut from the sample. Two shall be cut 4 inches from each edge and one from the center of the sample. Each specimen shall be placed on a flat surface and centered beneath a 6 inch by 6 inch plate, weighing 2.5 pounds, so as to exert a force of 0.10 psi on the specimen. The measurement shall be taken at the geometric center of the plate within 30 seconds after plate application.

4.6.3.2 Density. Density shall be measured according to FED-STD-101, Method 4008, for solids by water immersion. A single ply specimen approximately 2.5 inches by 2.5 inches shall be used.

4.6.3.3 Dustiness. Dustiness shall be measured according to FED-STD-101, Method 4011, Procedure A.

4.6.3.4 Blocking resistance. Blocking resistance shall be determined according to FED-STD-101, Method 3003, Procedure A. The specimen size shall be 3 inches by 3 inches. The pressure blocks shall exert a pressure of 0.1 psi and be 3 inches by 3 inches. The exposure condition shall involve dry heat and the specimen stack, including the bottom plate, shall be placed directly on a shelf in the oven. The oven temperature shall be 160 $\pm 2^{\circ}$F with an exposure time of 24 ± 1 hours.

4.6.3.5 Abrasiveness. Abrasiveness shall be determined according to FED-STD-101, Method 4002. The test surface shall be No. 1100 H-24 aluminum alloy with a standard one side bright finish..

4.6.3.6 Compression set. Specimens 5 inch by 5 inch by 1/4 inch thick shall be used. Material less than 1/4 inch thick shall be plied to measure 1/4 inch as closely as possible. Rounded corners or precompressed edges are to be avoided.

The 1/4 inch specimen shall be placed on a flat surface and the original thickness (t_o) determined as in 4.6.3.1. A 6 inch by 6 inch plate shall be centered on the specimen to give a constant and uniform load for 96 hours. The total load on the specimen shall be 5 pounds. After 96 hours the total load shall be removed and the specimen allowed to recover for 4 hours. The final thickness (t_f) shall be determined as in 4.6.3.1. Compression set shall be calculated as follows:

$$\text{Percent compression set} = \frac{t_o - t_f}{t_o} \times 100$$

4.6.3.7 Contact corrosivity. Contact corrosivity shall be determined according to FED-STD-101, Method 3005 using a steel test surface.

4.6.3.8 Dimensional stability. A 5 inch by 5 inch specimen shall be cut. The specimen shall be measured to the nearest 1/64 inch in the machine direction (MD) and transverse direction (TD). The specimen shall be placed on the shelf of the oven at 180°F for 4 hours. The specimen shall be removed and measured in both directions. Dimensional stability for each direction shall be calculated as follows:

$$\text{Dimensional stability (percent)} = \frac{L_o - L_1}{L_o} \times 100$$

Where:

L_o = original dimension

L_1 = final dimension

4.6.3.9 High and low temperature application. Tests shall be performed at the temperatures indicated. The specimens and pressure plate shall be conditioned simultaneously.

4.6.3.9.1 High temperature (160°F). Specimens 8 inches by 8 inches shall be cut randomly from the sample. Specimens shall be placed in an oven maintained at 160 ±5°F for 1 hour. After the 1 hour conditioning the specimens shall be folded in half and then folded in half again so that the final specimen size is 4 inches by 4 inches. The 5 inch by 5 inch pressure plate, exerting 0.25 psi, shall be centrally located on the folded specimen. After 1 minute the plate shall be removed and the specimen unfolded and examined for cracks or tears.

4.6.3.9.2 Low temperature (-65°F). The specimens tested at 160°F shall immediately be placed in a chamber maintained at -65 ±5°F for 1 hour. After the 1 hour conditioning, the specimens shall be folded in half and then folded in half again so that the final specimen size is 4 inches by 4 inches. The 5 inch by 5 inch pressure plate, exerting 0.25 psi, shall be centrally located on the folded specimen. After 1 minute the plate shall be removed and the specimen unfolded and examined for cracks or tears.

4.6.3.10 Water absorption. A 2 inch by 2 inch single ply specimen shall be weighted to the nearest 0.001 gram (W_o) and then positioned in water so that the uppermost surface of the specimen shall be submerged 1 inch. After 3 hours, the specimen shall be removed and allowed to drain on a piece of screen for 1 minute. The specimen shall be placed on a piece of Whatman No. 4 filter paper (4-3/8 inch diameter) and then another piece of the filter paper placed on the top surface of the specimen. A flat plate which exerts a pressure of 0.1 psi and is sufficient in size to cover the specimen, shall be placed on the filter paper for 1 minute. The plate and papers shall be removed and the specimen weighed to the nearest 0.001 gram (W_1). To calculate the amount of water absorbed by the area of uncut surface the following formula shall be used:

$$\text{Water absorption } (\text{lbs/ft}^2) = \frac{W_1 - W_o}{8} \times 0.317$$

4.6.3.11 Electrostatic properties (Type II only). Electrostatic properties of Type II materials shall be measured according to FED-STD-101, Method 4046.

5. PREPARATION FOR DELIVERY

5.1 Preservation. Preservation shall be Level A or C as specified (see 6.2).

5.1.1 Level A. Rolls and flat cuts shall be preserved as follows:

5.1.1.1 Rolls. Each roll shall be wound on a core with a minimum diameter of three inches and shall be suitably restrained from unwinding. Each roll, 72 inches in width (see 3.3.1.1) shall be wrapped or bagged in polyethylene conforming to L-P-378 or MIL-B-22191, Type III and suitably secured with tape or twist ties as required. Rolls less than 72 inches in width shall be consolidated, end to end, in unwrapped or unbagged condition, to the maximum roll width, then wrapped or bagged as specified for 72 inch rolls.

5.1.1.2 Flat cuts. Flat cuts shall be bundled in quantities as specified (see 6.2) and wrapped with polyethylene conforming to L-P-378 or kraft paper conforming to UU-P-268 and suitably secured with tape.

5.1.2 Level C. Rolls and flat cuts shall be preserved to afford adequate protection against deterioration and damage during shipment from the supply source to the first receiving activity.

5.2 Packing. Packing shall be Level A, B, or C as specified (see 6.2).

5.2.1 Level A. Rolls and flat cuts shall be packed in wood boxes conforming to PPP-B-601, overseas style A, B, or I or PPP-B-621, style 4. Containers shall be closed in accordance with the appendix of the applicable specification.

5.2.2 Level B. Rolls and flat cuts shall be packed in shipping containers conforming to PPP-B-636, class weather resistant. Where size of rolls exceeds the box size limitations of PPP-B-636, the material shall be packed in boxes conforming to PPP-B-640, Class 2. The container shall be closed in accordance with the appendix of the applicable specification.

5.2.3 Level C. Unit packages of rolls or flat cuts of cushioning material shall be packed to insure carrier acceptance and safe delivery at destination in containers complying with National Motor Freight Classification or Uniform Freight Classification depending on mode of transportation.

5.3 Marking.

5.3.1 Civil agencies. In addition to any special markings required by the contract or purchase order, containers shall be marked in accordance with FED-STD-123, for delivery to Civil agencies.

5.3.2 Military agencies. In addition to any special markings required by the contract or purchase order, containers shall be marked in accordance with MIL-STD-129, for delivery to military agencies.

6. NOTES

6.1 Intended use. The unicellular polypropylene foam sheeting covered by this specification is intended for use as a protective cushioned wrap for low density items. Type II material shall be used where protection from electrostatic discharge is required. For high density items, it can be used for protection of surfaces from abrasion. It is non-dusting and non-linting. Typical packaging applications would be surface protection for optical lenses, equipment with critical surfaces, electrical and electronic equipment, glassware, ceramics, and magnetic tape rolls.

6.1.1 Degree of inertness. Polypropylene foam can be stored in closed containers, i.e., there are no trapped volatile gases which could cause fire or explosions. Polypropylene, by its nature, is unaffected by exposure to grease, water and most acids, bases and solvents. It contains no plasticizers, solvents, or lubricants.

6.2 Ordering data. Purchasers should select the preferred options permitted herein and specify the following in acquisition documents:

a. Title, number and date of this specification.

b. Quantity and type (see 1.2).

c. Form (rolls, tear perforated rolls or flat cuts) (see 3.3).

d. Thickness (see 3.3.1.1).

e. Width (see 3.3.1.1, 3.3.1.3).

f. Length (see 3.3.1.1).

g. Tear perforation interval (if applicable) (see 3.3.1.2).

h. Quantity of flat cuts per bundle (see 5.1.1.2).

i. Level of preservation and packing required (see 5.1, 5.2).

j. If certification of fungus resistance, toxicity, and nature of blowing agent is required (see 3.2.1).

k. Whether first article inspection is required (see 4.3). When a supplier is in continuous production from contract to contract, consideration should be given to waive the first article inspection. If first article inspection is required, indicate where the first article inspection is to be conducted (at the supplier's or Government plant).

6.3 Disposability. The cushioning material is made from unstabilized polypropylene and is oxidized to a powder after continuous exposure to direct sunlight without protection for a period of approximately six months. It can be incinerated without producing copious amounts of smoke or noxious gases.

MILITARY INTERESTS:

Custodians

Army - SM
Air Force - 69
Navy - AS

Review Activities

Army - GL, AR
Air Force - 99
Navy - SA, SH

User Activities

Army - AT, ME
Navy - YD, OS

CIVIL AGENCY COORDINATING ACTIVITY:

GSA - FSS

PREPARING ACTIVITY:

Navy - AS

(DOD Project No. 8135-0536)

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NOTE: This form may not be used to request copies of documents, nor to request waivers, deviations, or clarification of specification requirements on current contracts. Comments submitted on this form do not constitute or imply authorization to waive any portion of the referenced document*(s)* or to amend contractual requirements.

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STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

(See Instructions – Reverse Side)

1. DOCUMENT NUMBER	2. DOCUMENT TITLE

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

5. PROBLEM AREAS

a. Paragraph Number and Wording:

b. Recommended Wo·ding:

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)*

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