INCH-POUND

A-A-52473
September 15, 1993
SUPERSEDING
MIL-I-62521(AT)
22 July 1987

COMMERCIAL ITEM DESCRIPTION

INSULATION, FLOOR-MAT, THERMAL-BARRIER

The General Services Administration has authorized the use of this commercial item description (CID) as a replacement for MIL-I-62521(AT) which is canceled.

ABSTRACT

This CID covers insulation material with thermal barrier properties intended for making floor mats used in military vehicles.

SALIENT CHARACTERISTICS

a. Materials. Unless otherwise specified herein, the materials used shall be in accordance with the manufacturer's material specifications for floor-mat insulation. The insulation when used within the performance parameters, except when burning, shall not contain any materials which would cause adverse effects on the health of the personnel. The use of recovered material made in compliance with regulatory requirements is acceptable providing that all requirements of this CID are met (see note d).

b. Composition. The insulation shall be a composite consisting of the following.

1. Vinyl. The cover material shall be 0.040 to 0.045 inch-thick deep-twist grain vinyl.

2. Barrier. The barrier shall be bonded between the vinyl and the foam. The barrier shall weigh 0.8 pounds per square foot, and shall have a specific gravity of 2.5 ± 5 percent.

Beneficial comments, recommendations, additions, deletions clarifications, etc. and any other data which may improve this document should be sent by letter to: U.S. Army Tank-Automotive Command, ATTN: AMSTA-GDS, Warren, MI 48397-5000.

AMSC N/A FSC 5640

3. Foam. The foam shall be 0.50 inch-thick closed-cell foam insulation.

c. Design and construction. The design and construction (e.g., configuration, size) of floor mats made from this insulation material shall be in accordance with the applicable engineering drawing (AED) (see note b). The color of the outer vinyl covering shall be green 383 per FED-STD-595.

d. Performance.

1. Adhesion strength. The adhesion strength of the vinyl to the barrier and the barrier to the foam at a 180 degree peel shall not be less than 2.2 pounds per linear inch in accordance with ASTM D903.

2. Thermal conductivity. The thermal conductivity of the insulation shall be not greater than 0.35 British thermal unit (Btu)/hour/square foot/ degree Fahrenheit/inch in accordance with ASTM C117.

3. Insulation tear resistance. The tear resistance of the insulation shall be not less than 25 pounds per inch (ppi) as specified in ASTM D624, die C.

4. Barrier/vinyl tear resistance. The tear resistance of the barrier/ vinyl shall be not less than 130 ppi in accordance with ASTM D624, die C.

5. Tensile strength. The tensile strength of the insulation shall be not less than 100 pounds force per square in (psi), and the tensile strength of the barrier-vinyl shall be not less than 500 psi.

6. Abrasion resistance. There shall be not more than 0.025 percent weight loss of the insulation when tested in accordance with ASTM D4158-92, the load shall be 500 grams and the number of cycles shall be 1000.

7. Flammability. The burning rate of the insulation shall be not greater than 2 inches per minute in accordance with SAE J369.

8. High temperature. The insulation shall be physically stable when exposed to temperature of 250 degrees Fahrenheit (°F) for seven 24-hour periods.

9. Low temperature. The insulation shall remain physically stable when exposed to a temperature of -40°F for 4 hours.

10. Low temperature (cold bend). After being cold soaked at -30°F, for 4 hours, the insulation shall evidence no cracks while bent 180 degrees around a 1-inch mandrel.

11. Chemical resistance. The insulation shall evidence no shrinkage when immersed in diesel fuel or lubricating oil, and shall evidence not more than 3-percent shrinkage when immersed in gasoline.

12. Material Safety Data Sheet (MSDS). The contractor shall prepare an MSDS when required to comply with the provisions of FED-STD-313 (see note b).

e. Identification markings. Unless otherwise specified in the AED, identification and marking of floor mats made from this insulation material shall be permanent and legible. It shall include, as a minimum, the AED part number and the manufacturer's CAGE code and part number.

QUALITY ASSURANCE PROVISIONS

a. Responsibility for inspection. The contractor is responsible for the performance of all inspections (examinations and tests).

b. Contractor certification. The contractor shall certify and maintain substantiating evidence that the product offered meets the salient characteristics of this CID and that the product conforms to the producer's own drawings, specifications, workmanship standards, and quality assurance practices. Items with known defects shall not be submitted for Government acceptance. The Government reserves the right to require proof of such conformance prior to the first delivery and thereafter as may be otherwise provided for under the provisions of the contract.

PRESERVATION, PACKAGING, PACKING, AND MARKING

Preservation, packaging, packing, and marking for the desired level shall be as specified in the contract or order (see note b).

NOTES

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

a. Addresses for obtaining copies of referenced documents.

1. Government specifications and standards. Copies of FED-STD-313 "Material Safety Data, Transportation Data and Disposal Data for Hazardous Materials Furnished to Government Activities", and FED-STD-595 "Colors Used in Government Procurement" are available from the Navy Publications and Printing Service Office, Standardization Documents Order Desk, Bldg. 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094.

2. Industry standards. ASTM C117 "Standard Test Method for Materials Finer than 75 Micrometer", ASTM D624 "Standard Test Method for Tear Strength of Conventional Vulcanized Rubber and Thermoplastic Elastomers", ASTM D903 "Standard Test Method for Peel or Stripping Strength of Adhesive Bonds" and ASTM D 4158-92 "Standard Test Method for Abrasion Resistance of Textile Fabric" are available from the American Society for Testing and Materials (ASTM), 1916 Race Street, Philadelphia, PA 19103. SAE J369 "Flammability of Polymeric Interior Materials - Horizontal Test Method, Standard" is available from the Society of Automotive Engineers, Inc. (SAE), 400 Commonwealth Drive, Warrendale, PA 15096.

b. Ordering data. Acquisition documents must specify the following:

1. Title, number, and date of this CID.
2. Issue of the DODISS to be cited in the solicitation and if required, the specific issue of individual documents referenced.
3. When applicable, the mailing address of the activities requiring copies of the MSDS and the number of copies required.
4. Title, number, and date of the AED and part number.
5. Selection of applicable level and packaging requirements.

c. Cross-reference. Insulation conforming to this CID is interchangeable/substitutable with insulation conforming to MIL-I-62521(AT), dated 22 July 1987.

d. Regulatory requirements. The offeror/contractor is encouraged to use recovered materials in accordance with Public Law 94-580 to the maximum extent practicable.

MILITARY INTERESTS:

Custodian
Army - AT

CIVIL AGENCY COORDINATING ACTIVITY:
GSA - FSS

PREPARING ACTIVITY:
Army - AT

(Project 5640-0561)