[INCH-POUND]
A-A-52495
June 8, 1994
SUPERSEDING
MIL-S-12158D(AT)
13 June 1988

COMMERCIAL ITEM DESCRIPTION

SEALING COMPOUND, NON-CURING, POLYBUTENE

The General Services Administration has authorized the use of this commercial item description (CID) for all federal agencies.

1. SCOPE

This CID covers two types of mastic sealing compounds. The sealing compounds are polybutene based and non-curing. The intended use is as follows:

Type I - Sealing of metal to metal flange joints.
Type II - Waterproofing joints around hatches and other openings for fording operations.

2. SALIENT CHARACTERISTICS

2.1 Materials. The materials used in the sealing compound shall be polybutene based together with such other ingredients as are necessary to produce sealing compound conforming to the requirements of this CID. The use of recovered material made in compliance with regulatory requirements is acceptable providing that all requirements of this CID are met (see 5.6).

2.2 Penetration. When using a penetrometer with a standard cone the penetration values of the unworked sealing compound shall be 265 ± 3.5 millimeter (mm) for type I sealing compound and 150 ± 1.5 mm for type II.

2.3 Storage stability. The storage stability (change in penetration) of the sealing compound shall not exceed 12 percent (%) following 96 hours of oven aging at 158 ± 2 degrees Fahrenheit (°F).

2.4 Liquid separation. The volume of sealing compound liquid separation shall not exceed .1 milliliter (ml) following 96 hours of oven aging at 158 ± 2°F.

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.

FSC 8030

2.5 Extreme temperature resistance. The sealing compound shall not crack, flake or rupture during operating conditions when exposed to temperatures ranging from -65 ± 5°F to 158 ± 2°F

2.6 Shear cohesive strength (Type I only). The time required for a weighted aluminum strip to be withdrawn from type I sealing compound shall not be less than 7 seconds (see figure 1 for test fixture).

2.7 Volatile loss. The loss of volatile matter in the sealing compound shall not be more than 3% by weight after conditioning in a oven for 16 hours at 158 ± 2°F then cooled in a desiccator to room temperature.

2.8 Vertical flow. The sealing compound shall not sag more than .25 inch when applied to 5 inches in length and .125 inch thick to three steel strips which are hung free from a horizontal rod supported in an oven held at the temperature of 225 ± 5°F for one hour.

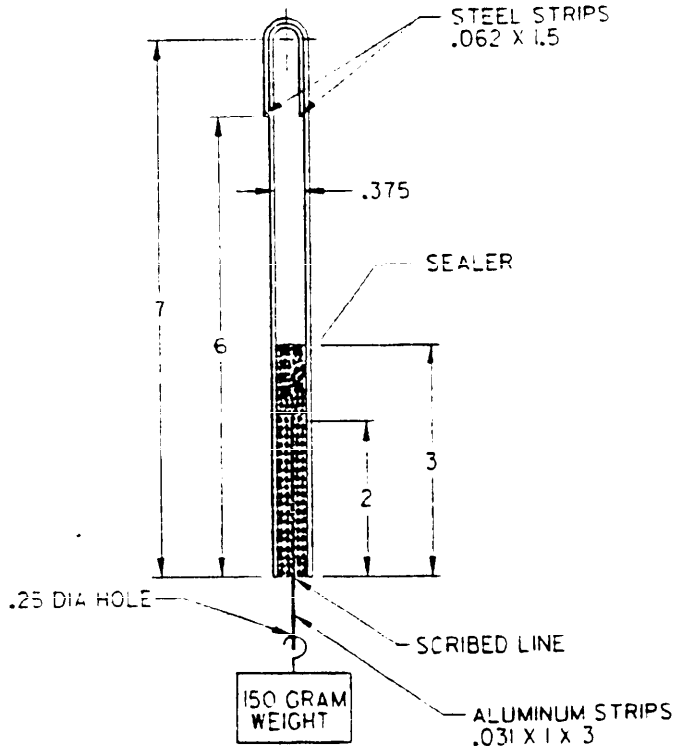


FIGURE 1. Cohesive strength fixture.

2.9 Torque drop (type I only). The torque drop of four bolts clamping two test fixture plates with a thin coat of type I sealant between the plates, shall be not more than 10%. To determine torque drop, the lower plate of the fixture (figure 2) shall be held in a vise and a thin layer of sealing compound shall be applied to the entire upper surface. The upper plate shall then be placed in position over the lower plate and the four bolts shall be finger-tightened in the plates. The bolts shall then be further tightened with torque wrench in 50 foot

pounds increments, to 300 foot pounds of applied torque. The order of tightening shall be 2,3,1,4 with the bolt holes numbered from 1 to 4 starting at one end. After a 15 minute wait, the minimum torque required to cause each bolt to begin to move, in the direction of further tightening shall be 270 foot pounds.

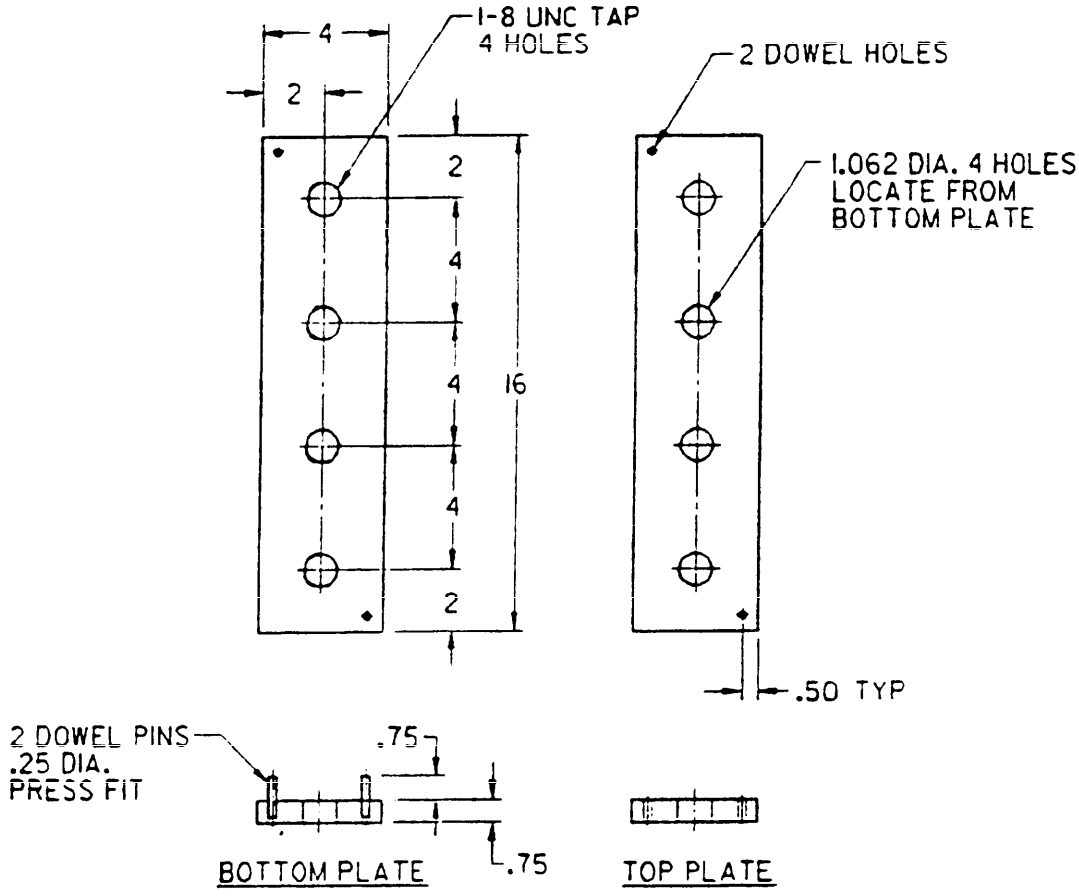


FIGURE 2. Torque drop fixture.

2.10 Water permeability (Type I only). When applied to the sealing surface the sealing compound shall not be water permeable.

2.11 Spreadability. When sealing compound is spread on a metal plate at 10 ± 3°F it shall spread to form a uniform layer free of thin spots, valleys, or any evidence of failure to adhere to the metal plate.

2.12 Staining. The sealing compound shall not stain or bleed through paint film.

2.13 Solubility. The sealing compound shall be soluble in kerosene or gasoline and shall wipe off easily and completely with kerosene or gasoline.

2.14 Adhesion. The sealing compound shall adhere to painted and unpainted aluminum surfaces.

2.15 Color. The color of the sealing compound shall be of such a shade that when painted over with paint of any color there shall be no difference in shade between areas coated with sealing compound and areas not coated.

2.16 Containers. The sealing compound, type I and II, shall be furnished in 1-gallon, multiple friction top containers, in 5-gallon lug cover steel pails, or in 55 gallon steel drums, as specified in the acquisition document (see note 5.3).

2.17 Instructions for use. The supplier shall furnish with each individual container a lable containing appropriate printed instructions for applying the sealing compound and any precautionary notes to assure safe and proper handling /use of the material. The lable shall be securely affixed to the side or top of the container. The markings shall not be adversely affected by contact with water or industrial chemicals, such as oil, grease, kerosene, or gasoline.

2.18 Material safety data sheet (MSDS). A MSDS shall be prepared in accordance with FED-STD-313 (see 5.2 and 5.6).

2.19 Identification markings. Identification markings shall be placed on the outside of the sealing compound container and shall be permanent and legible and shall include, as a minimum, the manufacturer's identification (CAGE) code, the contract number, the part or identification number (PIN) (see 5.3), and the national stock number (NSN).

3. QUALITY ASSURANCE PROVISIONS

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

3.2 Contractor certification. The contractor shall certify and maintain substantiating evidence that the product offered meets the salient characteristics of this commercial item description 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.

3.3 Testing. When specified (see 5.2) the government may require testing as specified herein instead of contractor certification.

4. PRESERVATION, PACKAGING, PACKING, LABELING, AND MARKING

Preservation, packaging, packing, and marking shall be in accordance with appropriate and applicable hazardous material regulations (1) Code of Federal Regulations Title 49 Parts 100-199 (49CFR), (2) International Air Transport Association (IATA), or (3) International Maritime Dangerous Goods Code (IMDG) as determined by both transportation and contracting authorities (see 5.2).

5. NOTES

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

5.1 Government standard. Copies of FED-STD-313 "Material Safety Data, Transportation Data and Disposal Data for Hazardous Materials Furnished to Government Activities" are available from the Defense Printing Service Detachment Office, Bldg. 4D (NPM-DODSSP), 700 Robbins Avenue, Philadelphia, PA 19111-5094.

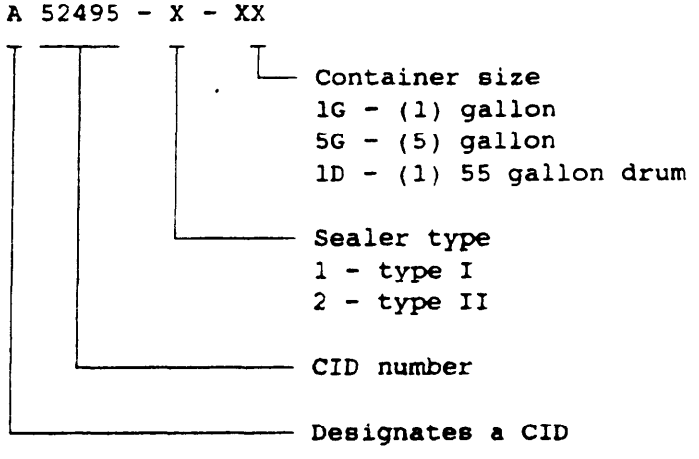
5.1.1 Other Government documents. Copies of DOT Title 49 Code of Federal Regulations (CFR) are available from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402-0001.

5.1.2 International standards. Copies of International Air Transport Association (IATA) documents are available from IATA, 26 Chemin De Junville, P.O. Box 160 1216, Cointrin, Geneva, Switzerland. Copies of International Maritime Dangerous Goods Code (IMDG), are available from Lablemaster, 5724 N. Pulaski Road, Chicago, IL 60646-6797.

5.2 Ordering data. Acquisition documents must specify the following:

a. Title, number, and date of this CID.
b. Issue of DODISS to be cited in the solicitation and, if required, the specific issue of the individual documents referenced.
c. Type of sealing compound, size (capacity) of container, and PIN number.
d. Identify activities requiring copies of completed MSDS and specify when the MSDS will be inspected.
e. Selection of appropriate and applicable hazardous material regulation(s), packaging, packing, marking, and labeling requirements.
f. Whether testing instead of contractor certification is required.

5.3 Part or identification number (PIN). The PINs to be used for the sealing compounds, acquired to this CID, are created as follows:



5.4 Cross-reference data. The sealing compound conforming to this CID are interchangeable/substitutable with the sealing compound conforming to MIL-S-12158D(AT).

5.5 MSDS. The contracting officer should identify those activities requiring copies of the completed MSDS prepared in accordance with FED-STD-313. Additional pertinent Government mailing addresses for submission of data are listed in appendix B of FED-STD-313.

5.6 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

Review activities:
Army - ME, MR, SM

User activity:
Army - AR

CIVIL AGENCY COORDINATING ACTIVITY:
GSA-FSS

PREPARING ACTIVITY:
Army - AT

(Project 8030-0654)