

TT-C-520B
February 2, 1973
SUPERSEDING
Fed. Spec. TT-C-520A
June 6, 1963

FEDERAL SPECIFICATION

COATING COMPOUND, BITUMINOUS, SOLVENT TYPE, UNDERBODY, (FOR MOTOR VEHICLES)

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

1. SCOPE AND CLASSIFICATION

1.1 Scope. This specification covers an asphalt compound suitable for use as a protective coating and sound deadener on the underbody parts of automotive equipment. It provides two compositions one of which is suitable for use under AIR POLLUTION REGULATIONS (see 6.7).

1.2 Classification. Coating compound covered by this specification shall be of the following composition as specified:

Composition G - General use.
Composition L - Limited use (see 6.7).

2. APPLICABLE DOCUMENTS

2.1 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:

QQ-A-250/4 - Aluminum Alloy 2024 Plate and Sheet.
QQ-C-576 - Copper, Flat Products (Plate, Bar, Sheet and Strip).
QQ-S-698 - Steel, Sheet and Strip, Low Carbon.
PPP-C-96 - Cans; Metal, 28 Gage and Lighter.
PPP-D-729 - Drums: Metal, 55-Gallon (For Shipment of Noncorrosive Material).
PPP-P-704 - Pails: Shipping, Steel (1 through 12 Gallon).

FSC 8030

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Federal Standards:

Fed. Std. No. 123 - Marking for Domestic Shipment (civil agencies).
Fed. Test Method Std. No. 141 - Paint, Varnish, Lacquer, and Related
Materials; Methods of Inspection, Sampling, and Testing.

(Activities outside the Federal Government may obtain copies of Federal Specifications and Standards as outlined under General Information in the Index of Federal Specifications and Standards and at the prices indicated in the Index. The Index, which includes cumulative monthly supplements as issued, is for sale on a subscription basis by the Superintendent of Documents, U.S. Government Printing Office, Washington, D. C. 20402.

(Single copies of this specification and other product specifications required by activities outside the Federal Government for bidding purposes are available without charge at the General Services Administration Regional Offices in Boston, New York, Washington, DC., Atlanta, Chicago, Kansas City, Fort Worth, Denver, San Francisco, Los Angeles, and Seattle, WA.

(Federal Government activities may obtain copies of Federal Specifications and Standards and the Index of Federal Specifications and Standards from established distribution points in their agencies.)

Military Standards:

MIL-STD-105 - Sampling Procedures and Tables for Inspection by
Attributes.
MIL-STD-147 - Palletized and Containerized Unit Loads 40" x 48" Pallets,
Skids, Runners, or Pallet Type Base
MIL-STD-290 - Packaging, Packing, and Marking of Petroleum and
Related Products.

(Copies of Military Specifications and Standards required by contractors in connection with specific procurement functions, should be obtained from the procuring agency or as directed by the contracting officer.)

2.2 Other publications. The following document forms a part of this specification to the extent specified herein. Unless otherwise indicated, the issue in effect on the date of invitation for bids or request for proposal shall apply.

American Society for Testing and Materials (ASTM) Standard

D 217 - Cone Penetration of Lubricating Grease

(Applications for copies should be addressed to the American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.)

3. REQUIREMENTS

3.1 Qualification. The compound furnished under this specification shall be a product which is qualified for listing on the applicable Qualified Products List at the time set for opening of bids (see 4.4.2.1 and 6.3). Any change in the formulation of a qualified product will necessitate its requalification. The material supplied under contract shall be identical within manufacturing tolerances to the product receiving qualification.

3.2 Composition requirements. The compound shall be a mixture of asphalts, solvents, fillers and additives processed to meet the requirements of this specification.

3.2.1 Asphalts. The asphalts used shall be produced by air-blowing the residuum from the steam or vacuum distillation of petroleum or naturally occurring bitumens which may be further processed.

3.2.2 Solvents. The volatile portion of the compound shall consist of any suitable petroleum hydrocarbon solvent or solvents. It shall contain no chlorinated hydrocarbons or other solvents of a highly toxic nature.

3.2.2.1 Composition L. The volatile content of composition L compounds shall also conform to the following requirements by volume when tested as in 4.6.3.

- (a) Aromatic compounds with eight or more carbon atoms except ethyl benzene: 8 percent maximum.
- (b) Ethyl benzene, toluene and branched ketones: 20 percent maximum.
- (c) Solvents with an olefinic or cyclo-olefinic type of unsaturation: negative test (see 6.8).
- (d) Total of a + b: 20 percent maximum.

3.2.3 Fillers. The fillers shall be short asbestos fiber or short asbestos fiber and fine inert mineral which shall pass through a 325-mesh sieve. Sand and other harsh abrasive material shall not be used.

3.3 Quantitative requirements. The compound shall conform to the quantitative requirements of Table I when tested as in 4.6.

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TABLE 1. Quantitative requirements

Characteristics	Requirements	
	Minimum	Maximum
Total solids, percent by weight of compound	60	--
Filler, percent by volume of nonvolatile	--	25
Weight per gallon, pounds	8.0	9.5
Flash point, °F.	100	--
Consistency, millimeters	32.0	38.5
Drying time, air dry, hours:		
Set to touch	--	4
Practical hardness ^{1/}	--	24

^{1/}The coating is considered to have reached practical hardness when firm pressure between the thumb and the finger shows a slight tacky condition, but the film is not ruptured and none of the coating adheres to the finger.

3.4 Qualitative requirements.

3.4.1 Condition in container. When tested as in 4.6.8, the compound shall show little or no settling in a freshly opened full container, shall show no curdling, livering, vehicle separation, or caking, and shall be free from lumps or skins.

3.4.2 Storage stability. When tested as in 4.6.9, a full one-gallon container of the compound, after six-months storage, shall meet the requirements of 3.4.3.

3.4.3 Spraying properties. The compound, tested as in 4.6.10, shall be uniform, continuous, and free from any pinholing that would expose the metal surface.

3.4.4 Sag test. When tested as in 4.6.11, the compound shall not sag when suspended vertically for 1 hour immediately after spraying. There shall be no flowing and piling up of the coating on the lower half of the panel.

3.4.5 Acid and alkali resistance. The compound, tested as in 4.6.12, shall show no signs of attack by the test fluids. On removal of the coating by solvent cleaning, the panel surface shall be free from pitting or rusting.

3.4.6 Corrosion. The compound, tested as in 4.6.13, shall not corrode steel, copper, or aluminum. The steel strips shall show no trace of corrosion. The copper and aluminum strips shall show no more staining and corrosion than similarly prepared strips heated but not immersed in the compound.

3.4.7 Fire resistance. The compound, tested as in 4.6.14, may char but shall not support combustion for more than 15 seconds after the flame source is removed.

3.4.8 Resistance to flow at elevated temperature. The compound, tested as in 4.6.15, shall not flow or creep.

3.4.9 Salt-spray resistance. The compound, tested as in 4.6.16, shall show no signs of blistering or lifting. On removal of the coating the steel surface shall be free from pitting and/or rusting.

3.4.10 Cold-temperature adhesion. The compound, tested as in 4.6.17, shall not loosen, flake, or chip from more than 5 percent of the total area.

3.4.11 Abrasion resistance. The compound, tested as in 4.6.18, shall not be cut through to bare metal at any point.

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the supplier is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified, in the contract or order, the supplier 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 Lot. For purposes of sampling and testing, a lot shall consist of underbody coating from one batch offered for delivery at one time.

4.3 Sampling.

4.3.1 Sampling for inspection of filled containers. A random sample of filled containers shall be selected in accordance with MIL-STD-105 at inspection level I and acceptable quality level equal to 2.5 percent defective to verify compliance with this specification in regard to fill, closure, and other requirements not involving tests.

4.3.2 Sampling for tests. From each inspection lot (see 4.2) two containers shall be selected at random. From each of the two containers, 1-quart samples shall be taken and placed in separate clean dry metal or glass containers and then sealed, marked, and forwarded to the designated testing laboratory.

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4.4 Inspection.

4.4.1 Inspection of filled containers. Each sample filled container as specified in 4.3.1 shall be examined for defects of construction of the container and the closure and for evidence of leakage; each filled container shall also be weighed to determine the amount of contents. Any container in the sample having one or more defects or under required fill, shall be rejected, and if the number of defective containers in any sample exceeds the acceptance number for the appropriate sampling plan of MIL-STD-105, the lot represented by the sample shall be rejected. Rejected lots may be resubmitted for acceptance provided the contractor has removed (or reworked) all nonconforming products.

4.4.2 Testing. Testing under this specification shall be for the following purposes:

- (a) Qualification testing.
- (b) Testing for acceptance of individual lots.

4.4.2.1 Qualification testing. Qualification testing shall consist of tests for all requirements specified in section 3 (see 6.3).

4.4.2.2 Testing for acceptance of individual lots. Testing for acceptance of individual lots shall consist of tests for the requirements specified in section 3 with the exception of storage stability (see 3.4.2 and 4.6.9), salt spray resistance (see 3.4.9 and 4.6.16), cold temperature adhesion (see 3.4.10 and 4.6.17) and abrasion resistance (see 3.4.11 and 4.6.18).

4.5 Lot acceptance tests. The samples selected in accordance with 4.3.2 shall be subjected to the tests specified in 4.4.2.2 as outlined in 4.6. Acceptance of the coating compound by the Government shall be based upon compliance of the material with the requirements of this specification. Rejected lots may be resubmitted for acceptance, provided the contractor has removed (or reworked) all nonconforming material.

4.5.1 Volatile composition (for composition L - see 3.2.2.1 and 4.6.3). Unless otherwise specified, in lieu of reporting analytical results on the breakdown of the volatile composition of the coating compound, the manufacturer may report such results as "calculated" under the condition that he has carefully described by separate report, the character and detail of his production methods which in his opinion, guarantee that any suitable analysis made by the Government will yield acceptable results. Production data shall include a quantitative statement of the formulation of the batch in terms of each individual ingredient identified by name, manufacturer, and code number, if any, plus substantiating data from ingredient manufacturer.

4.6 Test methods.

4.6.1 Test conditions. The routine and referee testing conditions shall be in accordance with section 7, Fed. Test Method Std. No. 141, except as otherwise specified herein.

4.6.2 The following tests in Table II shall be conducted in accordance with Fed. Test Method Std. No. 141 and as hereinafter specified.

TABLE II. Index

Tests	Test Method		Paragraph of this specification giving requirements
	Applicable method in Fed. Test Method Std. No. 141	Paragraph of this specification giving further references	
Chlorinated solvents	5132	4.6.3.1	3.2.2
Aromatic hydrocarbons	7356	4.6.3.2	3.2.2.1
Olefinic and cyclo-olefinic compounds	7356	4.6.3.1	3.2.2.1
Ketones	5172	4.6.3.3	3.2.2.1
Total solids	4041	--	Table I
Filler volume	4311	4.6.4	Table I
Weight per gallon	4184	--	Table I
Flash point	4293	4.6.5	Table I
Consistency	--	4.6.6	Table I
Drying time:			
Set to touch	4061	4.6.7	Table I
Practical hardness	--	4.6.7	Table I
Condition in container	3011	4.6.8	3.4.1
Storage stability	3022	4.6.9	3.4.2
Spraying properties	4331	4.6.10	3.4.3
Sag test	--	4.6.11	3.4.4
Acid and alkali resistance	--	4.6.12	3.4.5
Corrosion	--	4.6.13	3.4.6
Fire resistance	--	4.6.14	3.4.7
Resistance to flow	--	4.6.15	3.4.8
Salt spray resistance	6061	4.6.16	3.4.9
Cold temperature adhesion	--	4.6.17	3.4.10
Abrasion resistance	--	4.6.18	3.4.11

4.6.3 Solvent analysis for composition I.

4.6.3.1 Separation of volatile portion. Separate volatile portion in accordance with method 7355 of Fed. Test Method Std. No. 141. Reserve collected distillate for the tests for chlorinated solvents, aromatic content, toluene, ethyl benzene, olefinic or cyclo-olefinic compounds, and ketones.

4.6.3.2 Aromatic content. Determine total aromatic content of volatile portion in accordance with procedure A, method 7356 of Fed. Test Method Std. No. 141. If the total aromatic content is between 8 and 20 percent determine percent of toluene and ethylbenzene in accordance with procedure B, method 7356 of Fed. Test Method Std. No. 141.

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4.6.3.3 Determination of ketone content. Determine total ketone content according to method 5172 of Fed. Test Method Std. No. 141 (para 4.3); calculate as methyl isobutyl ketone. Omit first five sentences of paragraph 4.3.1 substituting the following. Add 15 ml. of absolute alcohol to a 250 ml. glass stoppered Erlenmeyer flask and accurately pipette in 1.5 ml. of distillate followed by exactly 25 ml. of hydroxylamine hydrochloride reagent.

$$\% \text{ ketone, v/v (computed as methyl isobutyl ketone)} = \frac{(V_1 - V_2) \times N \times 0.10 \times 100}{1.5 \times 0.98 \times 0.82}$$

4.6.4 Pigment volume. Determine pigment volume according to method 4311 of Fed. Test Method Std. No. 141 assuming the volatile thinner has a bulking value of 0.15 and the nonvolatile vehicle has a bulking value of 0.12.

4.6.5 Flash point. Flash point shall be determined in accordance with method 4293 of Fed. Test Method Std. No. 141, except that the stirrer shall be mechanically operated to stir in a downward direction at a speed of 70 to 80 rpm and the temperature shall be raised throughout the duration of the test at a rate of not less than 2° nor more than 3°F. per minute.

4.6.6 Consistency. Package consistency shall be determined in accordance with ASTM Method D 217 using the procedure for unworked penetration.

4.6.7 Drying time. Spray a 1/16-inch dry film of the compound on clean steel panels (see 4.6.7.1) and allow to air-dry in a horizontal position under referee conditions.

4.6.7.1 Steel panels. Steel panels shall be 20 gage cold rolled steel, conforming to QQ-S-698, SAE 1010 or SAE 1020 composition, with a Rockwell "B" hardness of 55 to 65 and a No. 2 luster finish. The panels shall be clean, free from corrosion, and sharp edges shall be removed with emery cloth.

4.6.8 Condition in container. Determine package condition in accordance with method 3011 of Fed. Test Method Std. No. 141 and observe for compliance with 3.4.1.

4.6.9 Storage stability. A full 1-gallon container of the compound shall be stored for 6 months and the storage stability determined in accordance with method 3022 of Fed. Test Method Std. No. 141. Observe for compliance with 3.4.2.

4.6.10 Spraying properties. Using a standard heavy material spray gun equipped with a 1/4-inch internal mixing nozzle and employing a maximum air pressure on the tank and gun nozzle of 80 lbs. per square inch, spray the compound onto a 12 by 12 inch steel panel (see 4.6.7.1) held in vertical position, to an average wet-film thickness of approximately 1/8 inch. Examine the coating for compliance with 3.4.3.

4.6.11 Sag test. Spray a 1/8-inch wet film of the compound evenly over a 4- x 12-inch steel panel (see 4.6.7.1). Immediately after spraying suspend the panel in a vertical position and observe for compliance with 3.4.4.

4.6.12 Acid and alkali resistance. Spray the compound on three degreased 4- x 12-inch steel panels (see 4.6.7.1) to give a dry-film thickness of approximately 1/16-inch (0.45-0.50 lb. per square ft.). Air dry 24 hours then bake 16 hours at $170^{\circ} \pm 5^{\circ}\text{F.}$ and allow to cool to room temperature. Seal the panels around the edges with a high melting point wax by dipping each edge approximately 1/4 inch in a molten solution of the wax and then immerse one panel to a depth of 6 inches for 24 hours at $25^{\circ}\text{C. (77}^{\circ}\text{F.)}$ in a 10 percent solution of each of the following: (a) hydrochloric acid, (b) sulfuric acid and (c) sodium hydroxide. On removal each panel shall be rinsed in tap water, wiped dry with a soft rag, and observed for compliance with 3.4.5. Remove the coating by solvent cleaning (or vapor degreasing) and examine the panel surface for compliance with 3.4.5.

4.6.13 Corrosion. Completely immerse three clean polished strips, one each of copper, QQ-C-576, aluminum, QQ-A-250/4, and steel (see 4.6.7.1) of any convenient size but not less than 1/2 inch by 3 inches in a container of the compound at a temperature of $80^{\circ} \pm 3^{\circ}\text{C. (176}^{\circ} \pm 5^{\circ}\text{F.)}$ for 24 hours. At the end of the test period remove, rinse with a petroleum naphtha solvent, and dry. Examine the panels for compliance with 3.4.6.

4.6.14 Fire resistance. Prepare three panels, 3- by 6-inches as in paragraph 4.6.12 but do not wax. Suspend one of the panels vertically in a shielded hood. Place burner (Bunsen or Tirell) with the air supply shut off and the flame regulated to 2 inches under the panel so that the lower end of the panel is in the flame 1 inch. Allow the flame to remain under the panel for 20 seconds. After the flame is withdrawn, observe the time that flaming continues and check for compliance with 3.4.7. Test shall be run in triplicate and the results averaged.

4.6.15 Resistance to flow at elevated temperatures. Prepare a 4- by 12-inch panel of the compound as in 4.6.12 but do not wax. Draw parallel lines spaced 1/2 inch apart across the width of the surface. Suspend the panel in a vertical position in an oven at $163^{\circ} \pm 3^{\circ}\text{C. (325}^{\circ} \pm 5^{\circ}\text{F.)}$ for 24 hours. On removal observe the surface of the coating for compliance with 3.4.8.

4.6.16 Salt-spray resistance. Prepare and wax three 4- by 12-inch panels as in paragraph 4.6.12 and then expose 360 hours to a 5 percent salt-spray in accordance with method 6061 of Fed. Test Method Std. No. 141. On removal, wash the panels in warm running water not more than 100°F. until free from any visible salt deposits and observe for compliance with 3.4.9. Insert a spatula under the coating along one of the wax edges and note if it lifts easily from the panels or adheres firmly. Lifting of the coating as a solid film or in areas of 4 square inches or over shall be cause for rejection. Remove any remaining coating by solvent cleaning (or vapor degreasing) and observe the panel surface for compliance with 3.4.9.

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4.6.17 Cold temperature adhesion. Three 12- by 12-inch steel panels (see 4.6.7.1) shall be masked for 1 inch along the edges. The compound shall then be applied and conditioned as in paragraph 4.6.12 and the masking tape removed. After conditioning for 2 hours at -10°F. , the test panel shall be removed from the cold box and immediately placed in the slam test apparatus (see figure 1). Asbestos gloves shall be used in handling the panel and no more than 5 seconds shall elapse from the time the panel is removed from the cold box and placed in the slam test apparatus. The panel shall then be slammed at 70, 80 and 90 degree angles observing momentarily the effects of the slams at 70 and 80 degrees. No more than 5 seconds shall elapse during the slamming and inspection at each specified angle and not more than 20 seconds shall elapse from the time the test panel is removed from the cold box and the 90-degree slam completed. Observe the coating for compliance with 3.4.10. Test shall be run in triplicate and the results averaged.

4.6.18 Abrasion resistance. Prepare a 4- by 12-inch panel as in paragraph 4.6.12 but do not wax. Lay the panel flat in a sandblasting hood and subject the coating to 20 passes of a sandblast gun conforming to the following dimensions:

Orifice of gun	1/2 inch
Inside diameter of sand hose	1-1/4 inches
Length of sand hose	10 feet
Inside diameter of air hose	1/4 inch
Air pressure	90-100 lbs. per sq. in.
Type of sand	Cape May
Mesh of sand	20-45

The sandblast gun shall traverse the 4-inch width of the panel in not more than 2 seconds at a distance of 1 inch from the surface of the coating. After 20 passes of the sandblast gun, the blasted area shall be examined for compliance with 3.4.11.

4.7 Inspection of preparation for delivery. The packaging, packing and marking of the coating shall be inspected to determine conformance to the requirements of section 5 of this specification.

5. PREPARATION FOR DELIVERY

5.1 The packaging, packing, and marking for military agencies shall be in accordance with MIL-STD-290 and as specified in 5.2 through 5.4.3.

5.2 Packaging (see 6.2).

5.2.1 Level A. The coating 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.

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5.2.1.1 One-gallon multiple friction top containers shall conform to type V, class 2, round, of PPP-C-96. Plan B exterior coating and side seam striping shall be required. One-gallon cans shall be supplied with wire handles coated to resist corrosion.

5.2.1.2 Five-gallon lug-cover steel pails shall conform to type II, class 3 of PPP-P-704. Wire handles or bails shall be treated to resist corrosion.

5.2.1.3 Fifty-five gallon steel drums shall conform to PPP-D-729, type III or IV.

5.2.2 Level C. The coating shall be packaged in accordance with suppliers' commercial practices. Protection shall be such as to prevent deterioration during shipment and ensure safe delivery at destination.

5.3 Packing (see 6.2).

5.3.1 Level A. The coating packaged in 1-gallon containers shall be packed in compliance with the overseas shipment requirements of PPP-C-96 (Appendix). Five-gallon pails and 55-gallon steel drums will require no overpacking.

5.3.2 Level B. The coating shall be packed in accordance with the domestic shipment requirements of PPP-C-96 (Appendix). Five-gallon pails and 55-gallon steel drums will require no overpacking.

5.3.3 Level C. Packing shall be in accordance with commercial practice adequate to ensure acceptance and safe delivery by the carrier for the mode of transportation employed.

5.3.4 Pallets. When specified (see 6.2) shipping containers shall be palletized in accordance with MIL-STD-147.

5.4 Marking.

5.4.1 Civil agencies. Intermediate packages and exterior shipping containers shall be marked in accordance with Fed. Std. No. 123 and as specified in 5.4.3.

5.4.2 Military agencies. Intermediate packages and exterior shipping containers shall be marked in accordance with MIL-STD-290 and as specified in 5.4.3.

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5.4.3 Additional marking (label requirements). Unless otherwise specified, each can, pail and drum shall be legibly marked or labeled with the following instructions for use and caution markings:

INSTRUCTIONS FOR USE:

This underbody coating is intended for use in one thick coat (1/8 inch) on the underside of hoods, fenders, floors, etc., of automobiles to deaden noise, to act as a seal against fumes, and to protect the metal from corrosion.

While it may be applied with a brush on small jobs, the material is usually applied in the field with standard heavy material spray equipment of which there are two main types. One is a pressure tank unit varying in capacity from 10 to 12 gallons. An air supply of 100 lbs. per square inch pressure and a volume of 10 to 15 cubic feet per minute normally supplied by a 3- to 5 hp., compressor, is needed for efficient application. The bottom outlet of the tank is coupled to the spray gun with approximately 15 feet of 3/4-inch fluid hose. The tank head is provided with either one or two sets of air pressure regulators and pressure gauges for control of air supply to the tank and atomizing air to the gun. The atomizing air outlet is connected to the gun with approximately 15 feet of 1/4-inch hose. A special spray gun having a spray head with 3/4-inch pipe thread for attaching the feed hose from tank and a 1/4-inch round nozzle is used. The second type of unit consists of an air-operated barrel pump that delivers the coating directly from the original 55-gallon containers to the gun. This eliminates the bothersome, time-consuming job of refilling the smaller pressure tank unit. Some pumps fit into bung opening of a drum cover but most come equipped with drum covers. The drum should be kept covered but not sealed air-tight as this would cause a vacuum to form. Twenty-five feet of 3/4-inch inside diameter hose is used to pump the coating to the gun. A 3/8-inch diameter hose is used to connect the spray gun to one of the two atomizing air outlets on the pump. The pumps come equipped with air regulator which controls air pressure on the pump and with a second regulator and gauge which controls air pressure on the air line to the spray gun for atomizing. The spray gun is the same as used with the pressure tank unit.

The material should be applied as received to the steel surface from which mud, grease, oil, tar, rust, etc., has been removed.

The underbody coating material should be stored under good conditions (40° to 90°F.) and the estimated 'shelf life' (closed containers) is 2 years.

CAUTION: FLAMMABLE

Keep compound away from flames. Provide adequate ventilation while applying the coating. Avoid prolonged breathing of vapors or excessive skin contamination.

6. NOTES

6.1 Intended use. The underbody coating covered by this specification is intended for use in one thick coat (1/8 inch) on the underside of hoods, fenders, floors, etc. of automobiles to deaden noise, to act as a seal against fumes, and to protect the metal from corrosion.

6.2 Ordering data. Purchasers should exercise any desired options offered herein and procurement documents should specify the following:

- (a) Title, number, and date of this specification.
- (b) Quantity and composition required.
- (c) Alternate inspection if applicable (see 4.1).
- (d) Level of preservation, packing, and packaging required (see section 5).
- (e) Unit and exterior package quantities when applicable.
- (f) The coating covered by this specification should be purchased by volume, the unit being one U.S. gallon of 231 cubic inches at 68°F. (20°C.).
- (g) Whether palletization of shipping container is required (see 5.3.4).

6.3 Qualification. With respect to products requiring qualification, awards will be made only for such products as have, prior to the time set for opening of bids, been tested and approved for inclusion in the applicable Qualified Products List whether or not such products have actually been so listed by that date. The attention of the suppliers is called to this requirement and manufacturers are urged to arrange to have the products that they propose to offer to the Federal Government tested for qualification in order that they may be eligible to be awarded contracts or orders for the products covered by this specification. The activity responsible for the Qualified Products List is the USA MERDC, Coating and Chemical Laboratory, Aberdeen Proving Ground, Maryland 21005, and information pertaining to qualification of products may be obtained from that activity.

6.3.1 Any questions raised regarding toxicity should be referred by the procuring agency to the departmental medical authority. In the case of Army procurement, The Surgeon General of the Army will act as advisor to the procuring agency.

6.4 The compound may be applied with either brush or power spray (see Directions for Use, paragraph 5.4.3). It is supplied ready for use, but may be thinned if desired with a small amount of mineral spirits conforming to TT-T-291.

6.5 Metal parts of vehicles should be clean and dry, free from rust, oil, and grease before applying the compound.

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6.6 It is believed that this specification adequately describes the characteristics necessary to secure the desired material, and that normally no samples will be necessary prior to award to determine compliance with the specification. If, for any particular purpose, samples with bids are necessary, they should be specifically asked for in the invitation for bids, and the particular purpose to be served by the bid sample should be definitely stated, the specification to apply in all other respects.

6.7 Composition L compound should be specified for use in areas with regulations controlling the emission of solvents into the atmosphere.

MILITARY CUSTODIANS:

Army - MR
Air Force - 84

User activities:

Army - AT
Navy - SA, MC

Preparing activity:

Army - MR

CIVIL AGENCIES COORDINATING ACTIVITY:

GSA-FSS

Orders for this publication are to be placed with General Services Administration, acting as an agent for the Superintendent of Documents. See section 2 of this specification to obtain extra copies and other documents referenced herein. Price 20 cents each.

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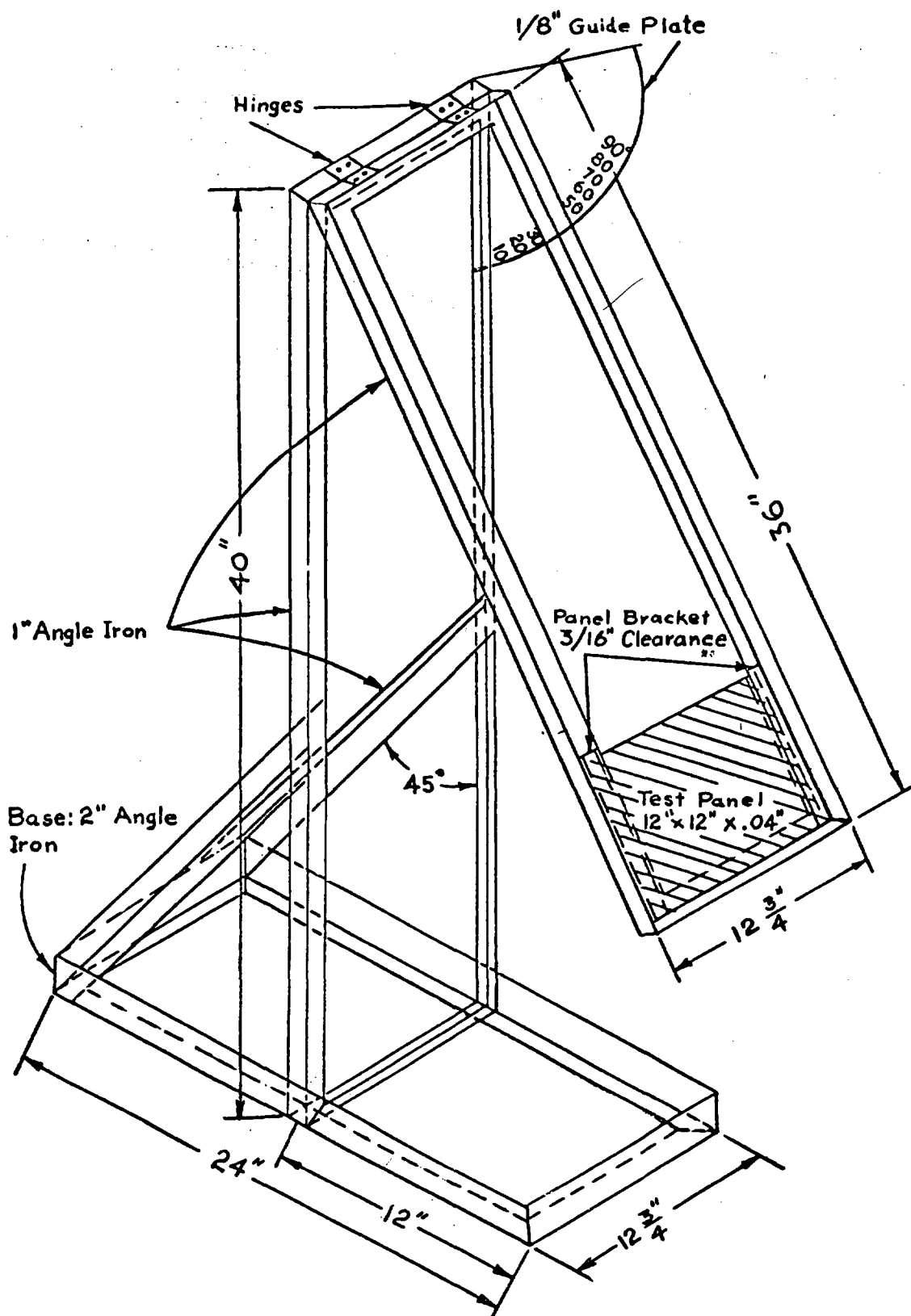


FIGURE 1.—Slam tester for cold adhesion.

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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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Director
US Army Materials and Mechanics Research Center
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Watertown, MA 02172



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