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Superseding

Mil-C-23760C
21 September 1977

MILITARY SPECIFICATION

COATING, SPRAYABLE, STRIPPABLE, PROTECTIVE, FOR PACKAGING OF WEAPONS SYSTEMS AND COMPONENTS: APPLICATION OF

This specification is approved for use by all Departments and Agencies of the Department of Defense.

1. SCOPE

1.1 Scope. This specification covers the detailed requirements and procedures to be followed in the application of sprayable, strippable coatings approved under MIL-C-6799 for the protection of painted and unpainted, metallic or plastic surfaces for weapon systems and components. The details contained herein shall not be construed as modifying any requirements of the basic material specifications.

2. APPLICABLE DOCUMENTS

2.1 Government documents.

2.1.1 Specifications, standards, and handbooks. Unless otherwise specified, the following specifications, standards, and handbooks of the issue listed in that issue of the Department of Defense Index of Specifications and Standards (DoDISS) specified in the solicitation form a part of this specification to the extent specified herein.

SPECIFICATIONS

FEDERAL

P-P-560 Polish, Plastic

P-W-155 Wax, Floor, Water Emulsion

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Commanding Officer, Engineering Specifications and Standards Department (Code 93), Naval Air Engineering Center, Lakehurst, NJ 08733, by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

NO DELIVERABLE DATA REQUIRED
BY THIS DOCUMENT

AREA PACK

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SPECIFICATIONS (Continued)

FEDERAL (Continued)

QQ-A-1876	Aluminum Foil
CCC-C-440	Cloth, Cheesecloth, Cotton, Bleached and Unbleached
PPP-F-320	Fiberboard, Corrugated and Solid, Sheet Stock (Container Grade), and Cut Shapes

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MIL-B-121	Barrier Material, Greaseproofed, Waterproofed, Flexible
MIL-B-131	Barrier Materials, Watervaporproof, Flexible, Heat-sealable
MIL-C-6799	Coating, Sprayable, Strippable, Protective, Water Emulsion
MIL-S-15847	Spray Guns and Accessories, Paint and Dope, Aircraft Use
MIL-T-21595	Tape, Pressure Sensitive Adhesive, Masking, Non Staining, For Aircraft Painting Applications
MIL-T-22085	Tape, Adhesive, Preservation and Sealing

STANDARDS

FEDERAL

FED-STD-595	Color (Requirements For Individual Color Chips)
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MILITARY

MIL-STD-129	Marking for Shipment and Storage
MS33739	Aircraft Markings, Servicing and Precautioning

(Copies of documents required by contractors in connection with specific acquisition functions should be obtained from the contracting activity or as directed by the contracting officer.)

2.2 Order of precedence. In the event of a conflict between the text of this specification and the references cited herein, the text of this specification shall take precedence.

3. REQUIREMENTS

3.1 Facilities for application. Application of sprayable, strippable compounds as listed herein shall normally be performed in any standard paint area. These compounds may also be applied outdoors in an

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area protected from dust, wind, and rain provided the temperature is between 45° and 125°F. When the temperature is below the specified range, temporary enclosures utilizing hot air heaters or ducts to pipe in heat shall be utilized. When ambient temperatures are above 100°F and relative humidity is below 30 percent, strippable coatings will usually be of poor quality (dry, porous, and non-strippable) when spraying is done in direct sunlight. If these problems exist, areas to be sprayed should be provided with temporary shade to reduce surface temperatures while coatings are being applied.

3.1.1 Personnel safety requirements. All requisite safety precautions shall be taken by personnel under the supervision of the Safety Engineer and the Industrial Health Officer.

3.2 Equipment.

3.2.1 Spray Equipment. To obtain best results, it is recommended that airless spray equipment be used such as the Grayco Bulldog Model #205-591 gun with standard tip. A reverse-A-clean tip with an orifice between 0.017 and 0.021 inch with a spray angle between 40 degrees to 60 degrees is recommended. In the absence of an airless unit, a DeVilbiss MBC model with an FF fluid tip and No. 765 air cap or equivalent may be used. Binks Model 18 Spray Gun, Fluid Nozzle 63B, Aircap 63PB, and Fluid Needle 63A are also considered adequate alternatives. Accessories such as pressure tanks, agitator, hoses, oil and water separator, gauges, and regulators shall conform to MIL-S-15847. All lines shall be kept free from condensation by blowing out the lines as necessary. Spray equipment parts in contact with the strippable coating material should be manufactured of stainless steel or other corrosion resistant material.

3.2.2 Care of spray equipment.

3.2.2.1 Continuous operation. At the close of each workday, the level of the compound in the pressure pot shall be checked. If the pressure pot is not three-quarters full, add compound to fill the pot to the maximum permissible level and replace cover. The spray gun shall be turned off and the gun triggered to fill the line and gun with compound. No air shall be permitted to contact the compound or it will solidify and cleaning of guns or lines will be necessary before the system can be reused. Spray guns, while attached to lines, shall be inserted into a pail of water (see 3.2.2.3) to prevent clogging of the spray heads for periods of time not exceeding 72 hours.

3.2.2.2 Indeterminate nonuse periods. When periods of nonuse are indeterminate, the compound shall be replaced in its original container, or other container affording comparable airtight protection, and the spray gun and accessories cleaned with water (see 3.2.2.3).

3.2.2.3 Cleaning of spray equipment. MIL-C-6799 compounds are difficult to dissolve after they are dry. Therefore, clean equipment by blowing the gun clear of compound and flushing with clean water before the compound begins to harden. Any compound left behind will solidify and cause clogging of lines and spray guns.

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3.3 Preparation of surface. Prior to the application of the compound, all surfaces shall be free from corrosion and residue foreign to the item to insure good adhesion.

3.3.1 Cleaning. Clean all surfaces to receive a strippable coating and remove any previously applied foreign coatings. Cleaning shall be accomplished with solvents, detergents, and processes which have no deleterious effect on the surface and which produce surfaces satisfactory for receiving the compound. Protect decals, stencils, neoprene, and rain erosion resistant material coated surfaces by applying a wax conforming to P-W-155. Do not buff or polish the wax coating.

3.3.1.1 Caution with plastics. Most solvents and cleaning agents are detrimental to acrylics and will scratch, soften, or craze the acrylic.

3.3.2 Drying. Immediately after cleaning, the item shall be thoroughly dried to remove cleaning solutions or residual moisture. Unless otherwise specified, drying shall be accomplished by one or more of the following procedures provided it is not injurious to the item.

3.3.2.1 Prepared compressed air. Drying shall be effected by subjecting the item to a blast of prepared dry and clean compressed air.

3.3.2.2 Oven. Drying shall be effected by exposing the item to the heated air within a properly ventilated and temperature-controlled oven.

3.3.2.3 Infrared lamps. Drying shall be effected by exposing the item to direct heat rays from banks of infrared lamps.

3.3.2.4 Wiping. Drying shall be effected by wiping the surfaces with clean, dry, lint-free cloths.

3.3.2.5 Draining. When the final step involves a petroleum solvent, thorough draining of the solvent shall be required.

3.3.3 Preparation of openings prior to application. Due to the inability of most sprayable, strippable coatings to bridge openings, closures shall be effected by the appropriate method included in paragraphs 3.3.3.1 through 3.3.3.6.

3.3.3.1 Openings greater than 12 inches. Openings greater than 12 inches shall be fitted with tempered masonite, plywood, fiberboard conforming to PPP-F-320, or barriers conforming to MIL-B-131 (Classes 1 and 2). Rigid fillers shall be cut approximately 1/4-inch undersize so that felt strips can be attached overlapping the outside edges. Flexible fillers shall be molded to permit intimate contact with the surface over which it is applied. A minimum overlap of 1 inch shall be provided wherever possible. The filler shall be secured in place with tape conforming to MIL-T-22085, having a minimum width of 2 inches (see 6.2). The tape shall be secured with a minimum overlap of 1/2-inch to the surface of the item wherever possible.

3.3.3.2 Openings measuring 6 to 12 inches. The same process specified in 3.3.3.1 shall be used except that plywood or tempered masonite shall not be used.

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3.3.3.3 Openings measuring 1-1/2 to 6 inches. Barrier material conforming to MIL-B-131 (Classes 1 and 2) shall be secured in place with tape conforming to MIL-T-22085.

3.3.3.4 Openings measuring 1/4-inch to 1-1/2 inches. These openings shall be sealed with tape conforming to MIL-T-22085.

3.3.3.5 Openings less than 1/4-inch. These openings in seams, butt joints, screws, or in other places which might prevent application of a continuous film shall be covered with tape conforming to MIL-T-22085. Where MIL-C-6799, Type II coating is used, these openings may also be filled with caulking compound available from suppliers of approved products under MIL-C-6799. This caulking compound can be applied by brush or flow gun. The recommended flow gun is the Binks Model No. 31 with No. D-1935 adapter or equivalent. A 4-inch polyethylene nozzle tapered to a 1/16 opening is used with a plastic spreader attached for proper deposit. The caulking compound shall be allowed to dry for a minimum of 1 hour prior to the application of MIL-C-6799, Type II, Class 1 coating. Care shall be taken to spread the compounds evenly and not overfill the areas as this will prevent obtaining a continuous seal with the basecoat over the caulked areas.

3.3.3.6 Screened coverings. These openings shall be covered as specified in 3.3.3.2.

3.3.4 Tear strip. A tear strip may be utilized to facilitate easy removal of the coating and eliminate the need for a sharp instrument. A section of cord, previously dipped in the same compound and dried, shall be placed over the surface to be coated. The coating shall be applied as specified in 3.6. After drying, pulling up on the cord will initiate stripping. The tear cord shall be labeled: Tear cord, begin depreservation here.

3.3.5 Masking. When application of these coatings is not intended to cover the entire surface of an item, it is often difficult to establish a line of demarcation and, in spraying, the feather edge zone is difficult or impossible to strip. Where applications to a large area are to be avoided, masking paper and masking tape shall be used. Smaller areas may be masked with tape conforming to MIL-T-21595. Masking materials shall be applied prior to spraying of coating and shall be removed immediately after the final application of the coating compound. Sometimes, removal of masking material where coating has dried will result in partial lifting of the coating. Repair shall be effected by sealing the edges down with tape conforming to MIL-T-22085. The lifted portion of the coating shall then be pressed down. Since this application is compatible, after drying, the coating will strip as one continuous piece. As an alternate procedure, masking may be accomplished by reducing pressure on the spray gun and applying a 2 to 3 inch wide bead of coating material completely around the area to be coated. When spraying this bead of coating material, the spray gun should be held approximately 3 inches from the surface. Minor overspray should be removed immediately using a cloth dampened with water.

3.3.6 Coating transparent acrylic surfaces. Transparent acrylic surfaces shall be cleaned and dried as specified in 3.3.1 and 3.3.2. Prior to application of the sprayable, strippable coating, acrylic surfaces shall be coated with plastic polish conforming to P-P-560. After 2 or 3 minutes, it

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shall be buffed with a clean white cheesecloth, sheepswool polishing cloth or any soft fabric which will not scratch these surfaces.

3.3.7 Use with preservatives or operational lubricants. These coatings are adversely affected by most preservatives and lubricants as evidenced by the lack of adhesion, softening, or rupturing of the coating. When the sprayable, strippable coating is to be applied to assemblies or items with critical surfaces treated with these materials, the items shall be wrapped in greasproof barrier material conforming to MIL-B-121, Grade A, or aluminum foil conforming to QQ-A-1876 prior to the application of protective coating.

3.3.8 Protection of voids. Coating surfaces equipped with attaching holes shall be plugged or sealed with tape conforming to MIL-T-22085 to assure coating compound does not clog the holes. Plugs shall be made of cork, rubber, wood, or plastic. If plugs are to be removed, this should be done while coating is wet.

3.3.9 Coating sharp edges. To prevent breaks in the coating at sharp edges, apply preservation tape conforming to MIL-T-22085 or embedded strips of cheesecloth conforming to CCC-C-440 into the first coating of the material and allow the coating to dry to a tack-free surface before applying the succeeding covering coats.

3.3.10 Installation of vents. When aircraft or large components are to be completely covered with a strippable plastic coating system and drainage or ventilation is not provided otherwise, install vents and bleeders in coated areas as follows:

3.3.10.1 Install bleeder vents and drains at the lowest points along the bottom of assemblies such as fuselage, wing butts, engine nacelles, cell closures, and over any overboard drain lines and openings.

CAUTION

To prevent possible damage to fuel cells from expansion due to temperature changes, temporary fuel vent mast covers must be punctured or removed after the coating has dried.

3.3.10.2 For installation of vents, leave fuel system vents open to allow breathing. When vents are located so as to collect water, airborne dirt, etc., install extension tubes as shown in Figure 1.

3.3.10.3 For equipment having sliding or raising assemblies such as canopies, open such assemblies sufficiently to install one vent tube on each side of canopy (Figure 2). Ventilator tube should fit snugly in opening and have nozzle directed downward. Seal all cracks around assembly.

3.3.10.4 For equipment without sliding or raising assemblies such as canopies, open such assemblies and install one ventilator tube in each opening. Seal all cracks.

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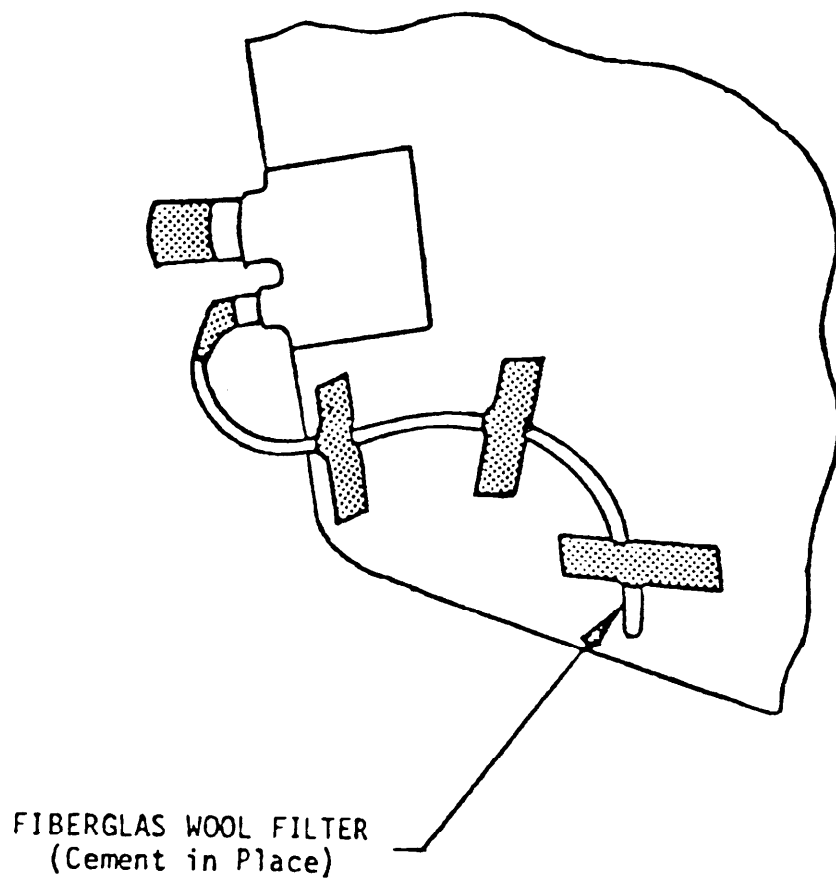


Figure 1. Fuel vent extension tube installation.

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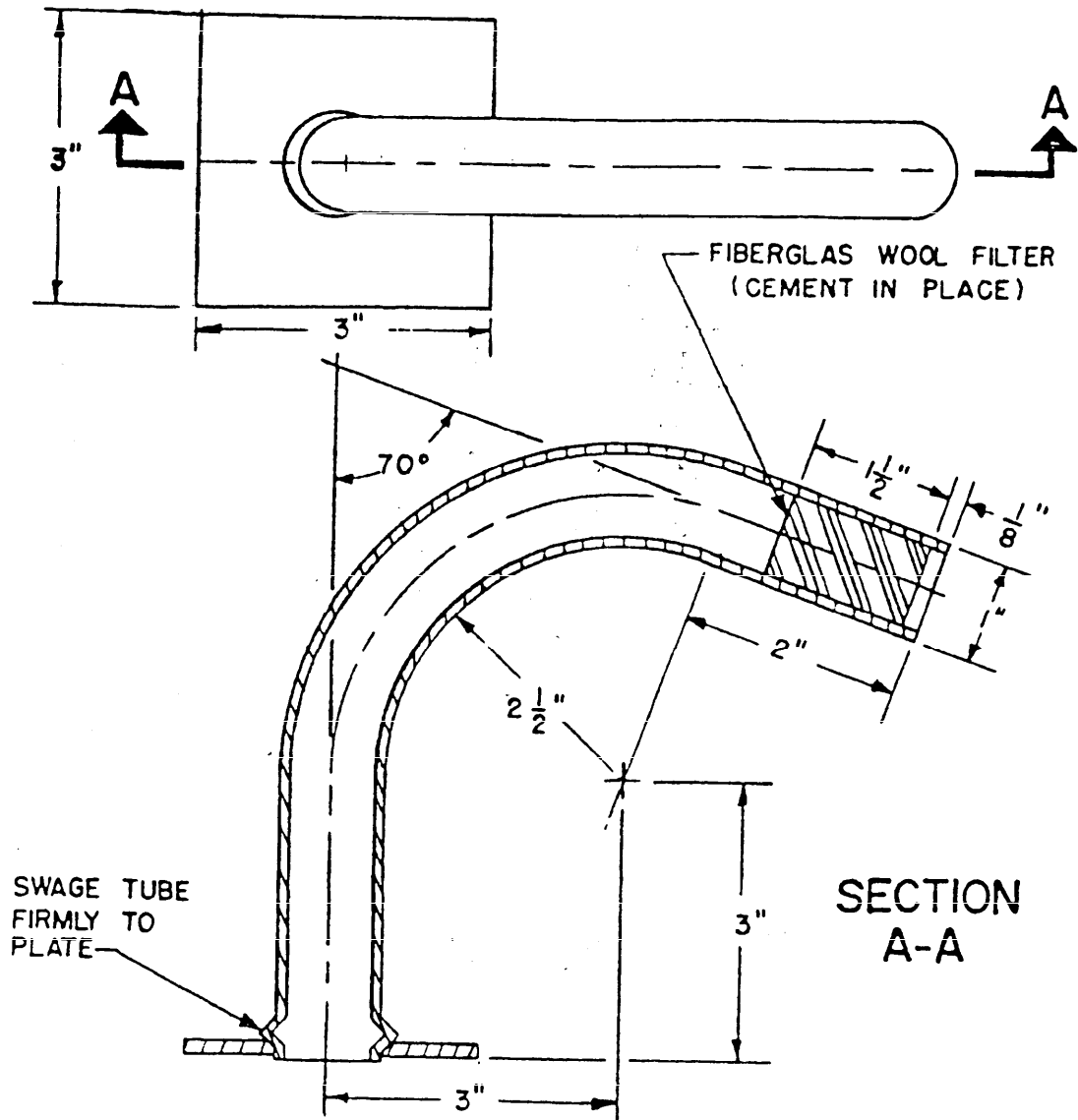


Figure 2. Ventilator tube.

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3.3.10.5 Ventilation of equipment for long term outdoor storage, normally too large to be stored indoors, consists principally of sealing all upper surfaces and potential water entrapment areas to prevent the entrance of rainwater and dew. When strippable plastic coatings are used for this purpose, access doors, plates, etc., located on the underside of the equipment are left open and vents are installed to allow free passage of air throughout the equipment. Outdoor ventilated storage also includes the sealing and dehydrating of individual compartments such as engines and electronic compartments.

3.4 Materials. The coating material shall conform to MIL-C-6799, Type and Class as follows:

3.4.1 Type I, Class 1. This material is intended for use as a single coat, interior, transparent, strippable, protective coating for acrylic plastic bulk materials and assemblies containing acrylic plastics when the protected item is shipped fully covered or stored under cover. It can also be used where the protected acrylic must undergo processes of sawing, sanding, drilling, or routing.

3.4.2 Type I, Class 2. This material is intended for use as a single coat, interior, opaque, strippable, protective coating for acrylic plastic bulk materials and assemblies containing acrylic plastics when the protected item is shipped fully covered or stored under cover. It can also be used where the protected acrylic must undergo processes of sawing, sanding, drilling or routing. For Army use the color shall conform to FED-STD-595, Color No. 24087.

3.4.3 Type II, Class 1, black. This material is intended for use as (1) a strippable, protective coating for acrylic plastic bulk materials and assemblies containing acrylic plastics when the protected item is shipped fully covered or stored under cover, and (2) as a basecoat for Type II, Class 5 materials.

3.4.4 Type II, Class 4, gray. This material is intended to be used only as a contrasting, intermediate coating to be applied over Type II, Class 1, black, basecoat material.

3.4.5 Type II, Class 5, white or olive drab. This material is intended to be used only as a topcoating for Type II, Class 1 or a combination of Type II, Class 1 and 4 materials. In combination this protective system serves as a sprayable, strippable, protective coating for application on metallic, painted and plastic surfaces such as entire aircraft, missiles, rockets, and transportation vehicles during outdoor storage and overseas deck-loaded shipments. For Army use the color shall conform to FED-STD-595, Color No. 24087.

3.4.6 Type II, Class 6, white. This material is intended to be used only as a topcoating for Type II, Class 1, or a combination of Type II, Class 1 and 4 materials. In combination this protective system serves as a sprayable, strippable, protective coating for application on metallic, painted and plastic surfaces such as entire aircraft, missiles, rockets, and transportation vehicles during outdoor storage and overseas deck-loaded shipments.

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3.4.7 Type III, white or olive drab. This material is intended for use as an exterior, single coat, strippable, protective coating for applications by spraying on plastic, painted, and metallic surfaces such as entire aircraft, missiles, rockets, and transportation vehicles during outdoor storage and overseas deck-loaded shipment. Class 1 material is intended to provide long term protection (up to 1 year). Class 2 material is intended to offer shorter term protection (up to 6 months). For Army use the color shall conform to FED-STD-595, Color No. 24087.

NOTE

The coating should not be used as a barrier or intermediate coat under laquers, primers, enamels, or similar materials.

NOTE

Materials conforming to this specification may become unsatisfactory for use if subjected to freezing conditions or temperatures above 150° prior to application.

3.5 Preparation of coating materials.

3.5.1 Handling of materials. Compounds shall be prepared for application under clean conditions with clean equipment. The container shall not be opened until ready for use. Before opening the container, the cover shall be cleaned and the container carefully opened to prevent dirt from falling into the compound. Skins, if present, shall be carefully removed. The compound shall be thoroughly stirred, manually or with power agitator, or shaken until pigment which may have settled is completely mixed. The compound shall be strained through fine mesh wire gauze or cheesecloth into the pressure pot or drum. Prior to use, the compound shall be of a consistency resembling cream and shall be smooth and homogeneous. During use, the compound shall be protected from excessive temperature changes, moisture, strong drafts, dust, or dirt. If the compound has been subjected to a damaging or adverse condition, an attempt shall be made to restore the compound to a usable condition by agitation. If this is not successful, dilution of the compound shall be effected in accordance with limitations specified in 3.5.2. The compound shall then be tested for conformance to nonvolatile, adhesion, tensile, and elongation requirements of the applicable coating specification.

3.5.2 Selection of thinners. Although these compounds are ready for use as received, if for some reason agitation alone will not produce the specified delivery rate or smoothness of film, these compounds shall be diluted as follows. Tepid water shall be used. A maximum of 3 ounces of water per gallon of compound may be used without adversely affecting the physical properties.

3.6 Spray application.

CAUTION

Experience in spraying paint is not adequate qualification for applying strippable coating. Therefore, the instructions specified in 3.6.1 through 3.6.10 shall be followed closely.

3.6.1 Equipment check. Check the equipment and make certain it is operable.

3.6.2 Air compressor start. Start the air compressor. If a separate compressor is provided for the spray application, close the air outlet valves and start the compressor. For gasoline and diesel compressors, disengage the clutch until the compressor runs sufficiently to unload, that is, until it automatically begins to idle. The pressure gage on the compressor should register approximately 85 to 100 pounds per square inch. Open the drain cock on the bottom of the compressed air tank to allow any condensation in the tank to be blown out. Close the valve after the water has been blown out.

3.6.3 Air compressor check. Check the air pressure. Hook up all the equipment leaving all valves off. Turn on the air supply valve at the compressor's other source. Turn on air at the coating material pressure pump to admit air to the air hose leading to the gun. All the air valves should now be open and all the fluid valves closed. Open the fan-adjustment screw at the gun and trigger the gun. The full air volume necessary when spraying is now being used. Continue to hold the trigger back and watch the air pressure on the gauge. If the compressor starts to operate, builds up to pressure, and then unloads, it is compressing sufficient air to maintain pressure. If the compressor runs steadily and the air pressure drops continuously and progressively, the compressor is too small. It is not unusual to have approximately a 20-pound drop in pressure when the trigger is first squeezed but the air pressure should not continue to drop after this initial decrease.

3.6.4 Airless spray gun adjustment. Fan and delivery is predetermined by tip selection. Inbound air pressure at the pump is the only adjustment. Recommended pressure is 90 psi. To increase atomization, increase pressure on the pump and do not exceed manufacturer's recommended limits.

3.6.5 Air spray gun adjustment. The adjustment for optimum spray conditions is more complicated for standard air spray equipment and requires experimentation (see 3.6.7).

3.6.6 Flow test. Test the flow of coating material. Gently agitate the compound continuously to prevent settling of the pigment during spraying. Make certain the air and the coating material from the pump to the gun are turned off at the pump and set a fluid pressure of 45 pounds. Some experimentation may be necessary for the first time in order to get a steady fluid pressure of 45 pounds. Turn the fluid-adjusting screw out at the gun until the trigger can pull the fluid needle all the way back, opening the fluid tip completely. Release the trigger. Open the fluid valve at the pump. Do not open the air valve at the gun. Point the gun into an empty

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container or into the access hole of the pump housing. Squeeze the trigger of the gun completely and wait for the coating compound to flow from the gun. After one or two bubbles or a small amount of erratic fluid flow, the compound should flow from the gun in a smooth, steady stream and practically in a straight line. At this point the delivery rate can be determined by checking the time it takes to fill a container of known volume. Maximum delivery rates per minute for MIL-C-6799 compounds should be 15 to 25 ounces. If necessary, increase the fluid pressure at the pump. If this does not produce the desired delivery rate, dilution may be necessary in which case the instructions specified in 3.5.2 should be followed. By releasing the trigger and screwing in the fluid-adjusting screw at the same time, the flow of compound will be cut down until the stream begins to arc or curve. When this point is reached, release the trigger completely.

3.6.7 Spray pattern. To get the right balance between air and the coating material, adjust the spray gun until the correct spray pattern is achieved. Proceed as follows:

- a. Select a flat surface for practice spraying.
- b. Close the fan-adjusting and the fluid-adjusting screws all the way (screw in).
- c. Open the air valve.
- d. Squeeze the trigger of the gun (only air should come out).
- e. Hold the gun perpendicular to and 6 to 8 inches from the practice surface to be sprayed.
- f. Slowly turn fluid-adjusting screw out triggering the gun intermittently and completely. A small amount of fluid should flow producing a dry feathery pattern. This is an indication that there is too much air for the amount of fluid. The coating is drying in the air before it strikes the surface to be sprayed.
- g. Continue to turn the fluid-adjusting screw out while triggering the gun in short bursts until a round, wet pattern is produced. Move the gun from one place to another across the surface to avoid previous patterns. (The pattern may be dry and feathery at the edges but in the center it should be wet and glossy with a tendency to run.)
- h. Adjust the air fan slowly by turning the fan-adjusting screw out. Continue to turn the fan-adjusting screw to spread the spot out into a strip or fan. (The additional air that comes from the fan openings in the air cap tends to atomize the fluid still further and spreads the spot out into a line or fan distributing the coating over more area.)

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- i. Continue to turn the fan-adjustment and the fluid-adjustment screws until a pattern about 6 to 8 inches wide is produced. This should be wet, glossy, and continuous without dry and feathery texture, except at the edges. Continue to hold the gun perpendicular to the surface to be sprayed and 6 to 8 inches away.

3.6.8 Atomization. Check to see that the coating material is atomized. To test atomization, leave the spray gun set as before, squeeze the trigger completely, and move the gun rapidly in one direction only across the surface to be sprayed, releasing the trigger at the end. This should produce a discontinuous coating of separate droplets, small in size and wet. Vary the fluid adjustment and the air fan adjustment until small wet droplets are produced while still maintaining a fan width of 6 to 8 inches and distance of 6 to 8 inches. This is a finely atomized spray. (Be sure that the droplets are wet and glossy except at the edges of the fan.)

3.6.9 Test film. Spray a test film. To be satisfactory, the sprayed film must be smooth, wet, and continuous. Slow down the rate of gun movement progressively until the material starts to run or sag. Note that there is a point at which the coating first begins to show a ripple as it is applied. This will be after the point at which the coating first begins to look wet, glossy, and continuous and before the point at which it begins to sag. This point represents the correct speed of gun movement. The rippling effect will follow the gun as it moves and can be emphasized by tilting the gun very slightly so that the gun is aimed back at the area already coated. As the speed of movement of the gun is slowed, these ripples will become more evident until finally the material will begin to run.

3.6.10 Application of materials.

3.6.10.1 Spraying conditions. The minimum temperature for application of these water base compounds shall be 45°F. Spraying shall be performed indoors or out-of-doors in an area protected from dust, wind, and rain (see 3.1).

3.6.10.2 Spray method. Application of the first coat to a cleaned, dried surface shall be in a standard box coat fashion (one horizontal pass followed by one vertical pass), depositing a wet film. The nozzle of the gun shall be held 8 to 12 inches from the surface at all times. Do not arc the gun. The contour of the surface shall be followed carefully otherwise an uneven film will be applied and waste will result. When spray coating curved surfaces, the contour shall be followed and the edges feathered in by overtraveling. The first coat shall be approximately 4 to 5 mils of dry or 8 to 10 mils wet film thickness. Wet film thickness can be determined as specified in 4.4. A sufficient period of time shall elapse to attain a tack-free surface before application of a second coat. A change from a gloss to a dull surface indicates that the coating is tack-free. Coatings totaling 8 to 10 mils of dry film will usually air dry thoroughly in 8 to 16 hours depending on temperature and humidity. Where facilities are available and conditions warrant, accelerated drying procedures as specified in 3.7 shall be used.

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Subsequent coatings, whenever necessary, shall be applied in accordance with the procedure. Final dry film thickness shall be as follows:

Type I	9 +1 mil
Type II, Class 1 and 4	9 $\bar{+}$ 1 mil (weathered coatings of less than the thicknesses specified may be difficult to strip)
Type II, Class 5 and 6	3 to 4 mils
Type III, Class 1 and 2	12 $\bar{+}$ 2 mils

3.6.10.3 Overspray. Where overspray onto an unmasked surface occurs, coating shall be removed immediately by wiping with a soft cloth moistened with water which will not scratch the surface. The surface shall then be wiped with a dry cloth.

3.7 Accelerated drying of sprayable, strippable compounds.

3.7.1 General. Accelerated drying of coatings may be accomplished by using compressed air, infrared lamps, and temperature controlled, ventilated ovens. Whenever heat is applied to accelerate drying, allow the surface to cool to room temperature before applying succeeding coats.

3.7.2 Compressed air. Allow 10 to 15 minutes air drying, then subject the coated surface to a gentle blast of clean, dry compressed air. Air pressure on initial pass shall be kept low to prevent sagging of the coating.

3.7.3 Infrared lamps. Drying may also be effected by exposing the surface to the heat rays of infrared lamps. Unless the temperature on the surface of the coating can be controlled at no greater than 150°F and with good air circulation this method is not recommended.

3.7.4 Oven. Drying may also be effected by exposing the surface to heated air within a properly ventilated and temperature controlled oven. Coated surfaces should not be exposed to temperatures exceeding 150°F. Depending on the amount of air circulating within the oven, drying of 8 to 10 mils of coatings can be effected at 115°F within 30 minutes or at 150°F within 15 minutes.

3.8 Storage of compounds. Compounds shall be stored at room temperature conditions wherever possible. Precautions shall be taken to prevent exposure of these compounds to freezing conditions as this can result in separation of the compound. All materials stored in excess of 18 months shall be tested for conformance to MIL-C-6799 prior to use.

3.9 Maintenance and repair of coated surfaces.

3.9.1 Inspection. After the applied coating has thoroughly dried, inspect surfaces thoroughly for pinholes, discontinuities, or breaks in the film. Pinholes may be repaired by applying a sprayed topcoat or by using brushable white compound (MIL-C-6799, Type II, Class 5 and 6). Give special attention to areas covered by tapes and areas around sharp edges, seams, or other discontinuities in the surface. All defects shall be corrected prior to

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storage by application of the same coating system. Inspection and repair of any defects such as tears, breaks, or erosion of the topcoat are essential to the proper performance of the protective system and inspections should be made at regular intervals. After one year's storage, the coating system should be inspected every three months.

3.9.2 Storage damage repairs. Damage occurring during storage shall be repaired as specified in 3.9.2.1, 3.9.2.2 and 3.9.2.3.

3.9.2.1 Reapplying coating. Repair shall be effected by removing the loose coating, cleaning the surface, and reapplying the same coating system. Where erosion or cracking of the topcoating has begun after prolonged storage, reapply a 2 to 3 mil white topcoating.

3.9.2.2 Defects larger than 6 inches. Damages measuring 6 inches or greater shall be repaired by cutting away the loose coating, exercising care not to damage the substrate. Tape conforming to MIL-T-22085 shall be applied to seal the coating edge to the substrate. Overspray with the appropriate type and class conforming to MIL-C-6799.

3.9.2.3 Defects smaller than 6 inches. Coating defects measuring less than 6 inches shall have the loose edges cut away, taking care not to damage the substrate. The surrounding area shall be wiped clean of dirt and dust and tape conforming to MIL-T-22085 shall be applied in overlapping strips adhering to the substrate as well as to the surrounding coating.

3.10 Symbol markings. All symbol markings of MS33739 that are found on aircraft prior to application of the coating shall be affixed directly on the coating in the appropriate locations.

3.11 Marking. All marking shall be in accordance with MIL-STD-129. Original markings shall not be disturbed. After application of the protective coating, attach a stencil indicating the item preserved, coating system used, the date of preservation, type of preservation, and the preserving activity.

3.12 Depreservation. When removing strippable coatings for maintenance and repair, do not use tools or instruments which will damage the underlying surfaces. Remove the coatings by working an edge loose, holding the loose material, and trimming with shears or a knife held in such a manner that the underlying surface is not scratched.

4. QUALITY AND PROCESS CONTROL

4.1 General. Inspectors and quality control personnel shall perform frequent and regular checks to assure compliance with the requirements of this specification.

4.2 Cleanliness. Inspectors shall perform tests prior to application of coatings to assure that the surface is thoroughly clean and free from corrosion and contaminates.

4.3 Bridging. Inspection shall be performed to assure proper closure over the openings prior to application of coatings.

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4.4 Film thickness. A section of the dried film approximately 1 inch by 1 inch shall be cut out and the thickness determined with an Ames, or equivalent, dry film gauge. If the film does not measure to the minimum required thickness, another coat shall be applied. If the film meets the required thickness, cut-away areas shall be repaired with tape conforming to MIL-T-22085. When using MIL-C-6799, Type II, Class 1 or 4 coating, inspection should be made on the coating with a Nordson, or equivalent, wet film gauge while the films are still wet. If this is not possible, small sections of the dry film should be removed and checked with an Ames, or equivalent, dry film gauge. If the film is not of the required thickness, another coat of material shall be applied. If the film is of the required thickness, the cut-away areas shall be repaired with tape conforming to MIL-T-22085.

4.4.2 Pinholes. The white topcoating, conforming to MIL-C-6799, Type II, Class 5 or 6, shall be visually inspected for pinholes and weak areas. Pinholes in the topcoat material should be repaired by the application of brushable repair material developed specifically for this purpose.

5. PACKAGING

5.1 This section is not applicable to this specification.

6. NOTES

6.1 Intended use. The procedures covered by this specification are intended for use in the protection of painted, metallic, or plastic surfaces with sprayable, strippable coatings.

6.2 Changes from previous issue. Asterisks are not used in this revision to identify changes with respect to the previous issue, due to the extensiveness of the changes.

Custodians:
 Army - MR
 Navy - AS
 Air Force - 69

Preparing activity:
 Navy - AS
 (Project No. PACK-0736)

Review activities:
 Army - AL, AT, AV, MI, SM
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1. DOCUMENT NUMBER MIL-C-23760D		2. DOCUMENT TITLE Coating, Sprayable, Strippable, Protective, for Packaging of Weapons Systems and Components: Application of	
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