

ROYAL CANADIAN AIR FORCE



USE OF
STRIPPABLE PLASTIC COATINGS
FOR PROTECTION OF
RCAF EQUIPMENT IN STORAGE

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USE OF STRIPPABLE PLASTIC COATINGS FOR PROTECTION OF RCAF EQUIPMENT IN STORAGE

DESCRIPTION OF MATERIALS

GENERAL

1 The Spraylat and Coverlac compounds covered in this EO are used for the protection of equipment in storage. Both types are homogenous stable liquids that may be sprayed on a dry surface to form a strippable plastic film or cover which will protect the surface covered for an indeterminate period of time during indoor storage and for a minimum period of one year during outdoor storage. The dried film is readily removed by stripping or peeling. The consistency of both compounds is such that they may be sprayed as received; using any standard type of pressure spray equipment.

2 Spraylat compounds are water dispersion compounds used for the protection of equipment in indoor storage and for masking purposes when spray painting. They are non-volatile and non-toxic and therefore may be used safely indoors or outdoors.

3 Coverlac compounds are solvent cut compounds used as a cover coat over Spraylat, on equipment being stored outdoors. Some of the Coverlac compounds are also used for protection of polished metal surfaces against handling and manufacturing hazards.

SPRAYLAT COMPOUNDS

4 Spraylat SC1074B-1 (40D/8/8030-21-801-9837, US Specification MIL-C-006799B (Aero) Type 2, Class 1) is a water dispersion black pigmented compound used for spraying aircraft and other RCAF equipment that is held in indoor storage, to protect against dust, bird excretions and other foreign material. It may be safely sprayed on any painted surface, plexiglas, rubber or fibreglas.

5 Spraylat "A" (40D/8/8030-21-801-8527, US Specification MIL-C-006799B (Aero) Type 1) is a clear, water dispersion compound used for protection of Lucite, Plexiglas and other plastic surfaces. It may be used for the protection of aircraft canopies and radomes while in storage, while being worked upon or while the aircraft is undergoing inspection or repair. Spraylat "A" (40D/8/8030-21-801-8527) may also be used as masking while spray painting.

COVERLAC COMPOUNDS

6 The film forming materials or dry solids in Coverlac are dispersed in a solvent as compared to the water dispersion of Spraylat. For this reason Coverlac Compounds should not be sprayed directly onto Rubber, Lucite, Plexiglas or other plastic surfaces.

7 Coverlac SC247 (40D/8/8030-21-801-9836, US Specification MIL-C-006799B (Aero) Type 2, Class 3) is a white pigmented solvent cut compound used as a cover coat over Spraylat SC1074B-1 (40D/8/8030-21-801-9837) on aircraft or equipment being prepared for outdoor storage.

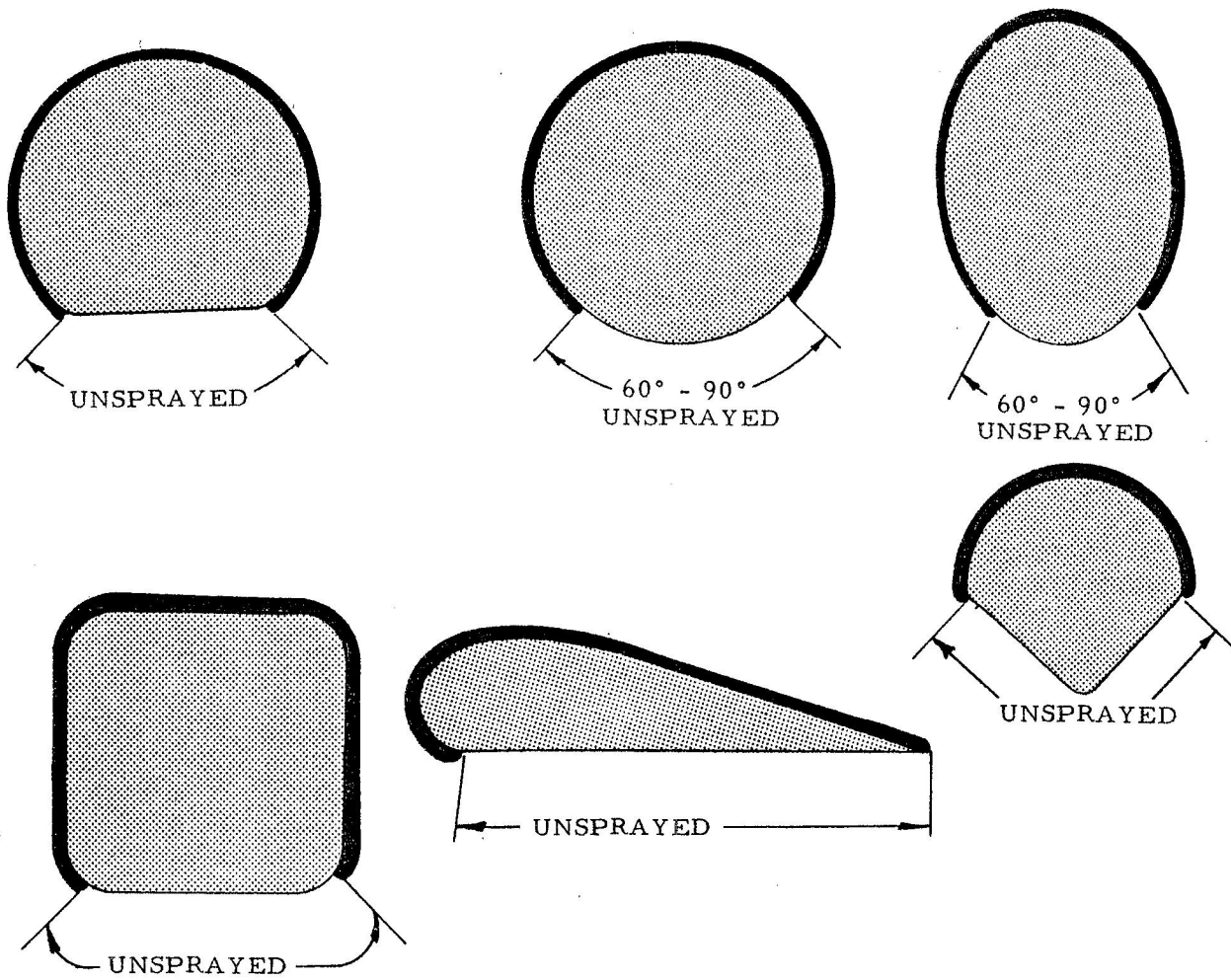


Figure 1 Typical Cross Sections of Fuselage and Components Showing the Extent of Coverage

8 Coverlac SC224 (40D/8/8030-21-802-2083) is a solvent cut compound available in transparent, orange, clear, or any other color required. It is used for the protection of high finish unpainted metal sheets or stock while in storage. It may also be used as a protective coating during handling, forming or machining of such sheets or stocks. Once sprayed on, such procedures as blanking, drilling, machining, form rolling or rivetting may be carried out yet the surface of the metal is fully protected.

PREPARATION OF MATERIALS AND SPRAYING TECHNIQUES

PREPARATION OF SPRAYLAT COMPOUNDS FOR SPRAYING

9 Prepare as follows:-

- (a) Stir Spraylat with a paddle or mechanical mixer until thoroughly mixed. Strain through wetted cheese cloth into pressure pot or spray gun.
- (b) Any pressure type spray gun may be used. Suction type guns should not be used. The air pressure for atomization should be above 60 pounds per square inch at the gun. The air pressure in the tank should be sufficient to deliver an adequate volume of Spraylat to the gun. If the spraylat is heavy and the film is not smooth, the compound may be diluted very carefully with a small amount of tap water.
- (c) Spraylat coatings should be applied at room temperature to ensure strong films (a temperature range of 18.3°C to 32.2°C (65°F to 90°F) is recommended). Avoid spraying during very humid weather as high humidity will cause excessive running and uneven drying with soft spots in the dried film.
- (d) Spraylat films can be air dried at room temperatures. A four mil (.004") film is tack free in one hour. This is the recommended minimum drying period before applying a second coat of Spraylat. When applying Coverlac, over a Spraylat coat, the recommended minimum drying period for Spraylat is four hours before spraying with Coverlac. A longer drying period will be required during humid weather.
- (e) Spraying equipment may be cleaned with warm water. Any dried Spraylat that cannot be removed with water or by stripping may be removed with Methyl Ethyl Ketone 33C/520.

PREPARATION OF COVERLAC COMPOUNDS FOR SPRAYING

10 Prepare as follows:-

- (a) Stir Coverlac thoroughly with a paddle or mechanical mixer. Strain through cheese cloth into pressure pot or spray gun.
- (b) Use any pressure type spray gun with a minimum atomization pressure of 60 pounds per square inch. The pot pressure should be sufficient to deliver an adequate volume of Coverlac to the gun nozzle. Thinning of Coverlac is not recommended.
- (c) Coverlac is a quick drying compound. If a second coat is necessary it may be applied within 10 minutes after the first coat.
- (d) Spraying equipment may be cleaned with Cleaner Varsol 3-GP-8 and Methyl Ethyl Ketone thinners 33C/520.

SPRAYING TECHNIQUE - SPRAYLAT AND COVERLAC

11 Spray in the following manner:-

- (a) Adjust the nozzle of the spray gun to obtain a fan or oval shaped spray 8 to 10 inches wide with the gun nozzle held 8 to 10 inches from the object being sprayed. Adjust the delivery rate to give a wet film.

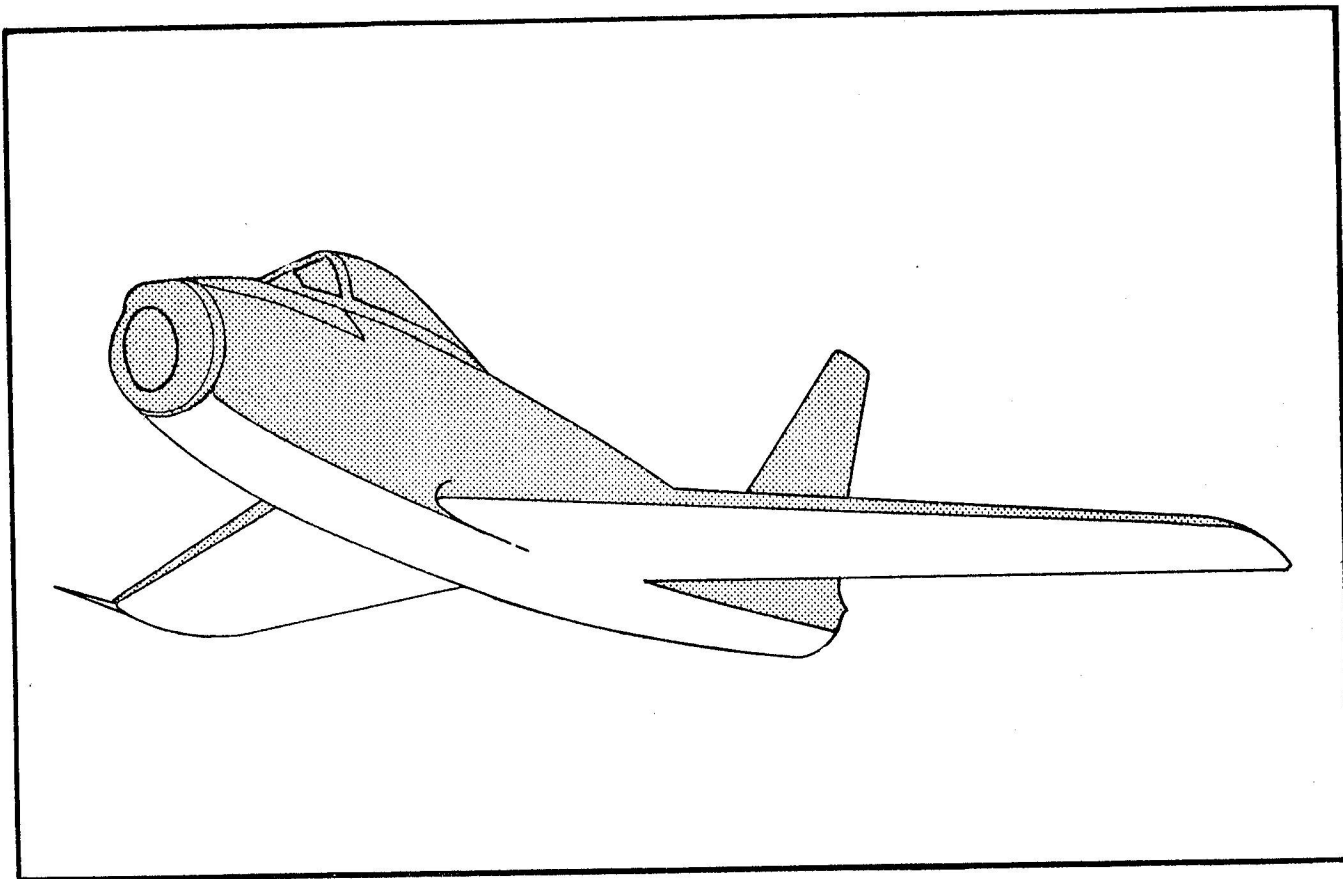


Figure 2 A Typical Aircraft Showing the Area that Shall be Covered with Spraylat

- (b) Use a free arm motion in making a stroke. Do not swing the gun so that the distance of the nozzle from the work varies from start to finish of the stroke. Follow the contours of the surface carefully to obtain an even film
- (c) When a stroke has been completed, shift the position of the gun for the next stroke to obtain an overlap of half the previous stroke. Shifting the gun too far or too little will result in an uneven film.
- (d) Avoid feather edges when spraying. Use masking tape to obtain an even film edge for easy stripping.

PROTECTION OF RCAF EQUIPMENT

PROTECTION OF AIRCRAFT - INDOOR STORAGE

12 Preparation of aircraft before spraying:

- (a) Clean aircraft - refer to EO 50-10-1 and 50-10A-2A for cleaning materials and procedures. The surface must be completely dry before spraying: any dampness or droplets of moisture will cause severe running of the spraylat. Blow all residual water from the seams, joints and openings with compressed air.

(b) All openings, joints or seams, in the surface to be spraylatted, that cannot be bridged with Spraylat must be masked. Use plastic film Tape #471, 33G/169, for best results or alternative, Tape-adhesive water resistant, 33G/178.

(c) For indoor storage Spraylat SC1074B-1 (40D/8/8030-21-801-9837) US Specification MIL-C-006799B (Aero) Type 2, Class 1) shall be applied in two coats of 4-5 mil dried film thickness for a total minimum thickness of 8 mil.

NOTE

Applying a coat of Spraylat to a dry vertical surface to the point of running or sagging will result in a dried film thickness of 5-6 mil. This is only a rough guide. It will be only through experience that the operator will learn to judge his rate of application to obtain the desired film thickness.

13 Areas to be Covered with Spraylat - An aircraft shall have the upper surface of the fuselage, wings, tailplane and nacelles covered with a continuous unbroken film of Spraylat leaving the lower surfaces clear to prevent the collection of condensation in the plastic film. It is not intended to enclose the aircraft in an air-tight plastic film as with cocooning. Plastic film is used for protection of the upper surfaces that are exposed to corrosive action of dust, bird excretion and other corrosive elements that normally collect on aircraft held in storage. The operator shall be guided by this EO and by Figures 1, 2 and 3 in determining the areas of an aircraft that shall be covered. Figure 1 shows some typical shapes of fuselage and component cross sections and the extent of coverage to be applied. Figures 2 and 3 show the recommended coverage of a typical aircraft prepared for storage.

(a) Fuselage - All upper and side surfaces of fuselage including windows, canopies, radomes etc., shall be covered. Refer to Figures 1 and 2.

(b) Mainplanes - All upper surface of mainplanes, from the trailing edge around the leading edge to the lower edge of the de-icer boot. De-icer boots to be completely covered. Any leading edge section that is not fitted with a de-icer boot shall be covered to that point that would normally be covered if a de-icer boot were fitted. All upper surfaces of mainplanes shall include ailerons, trim tabs and flaps. Refer to Figure 1.

(c) Tail Assembly - All upper surfaces of horizontal stabilizer and elevators including trim tabs and de-icer boots. Refer to Figure 1. The complete vertical stabilizer and rudder.

NOTE

Ensure that drain holes if fitted are left clear.

(d) Nacelles - Upper surfaces and sides of engine nacelles and cowlings - excluding that portion of the nacelle that is underneath the wing.

(e) All synthetic protuberances under the fuselage or wings. i. e. Radomes, gun turrets, Radio Compass Antenna etc. shall be completely covered.

NOTE

Drain holes to be left clear if fitted.

(f) Undercarriage - Undercarriage doors, wheel fairings and hub covers shall have the finished or painted surfaces covered.

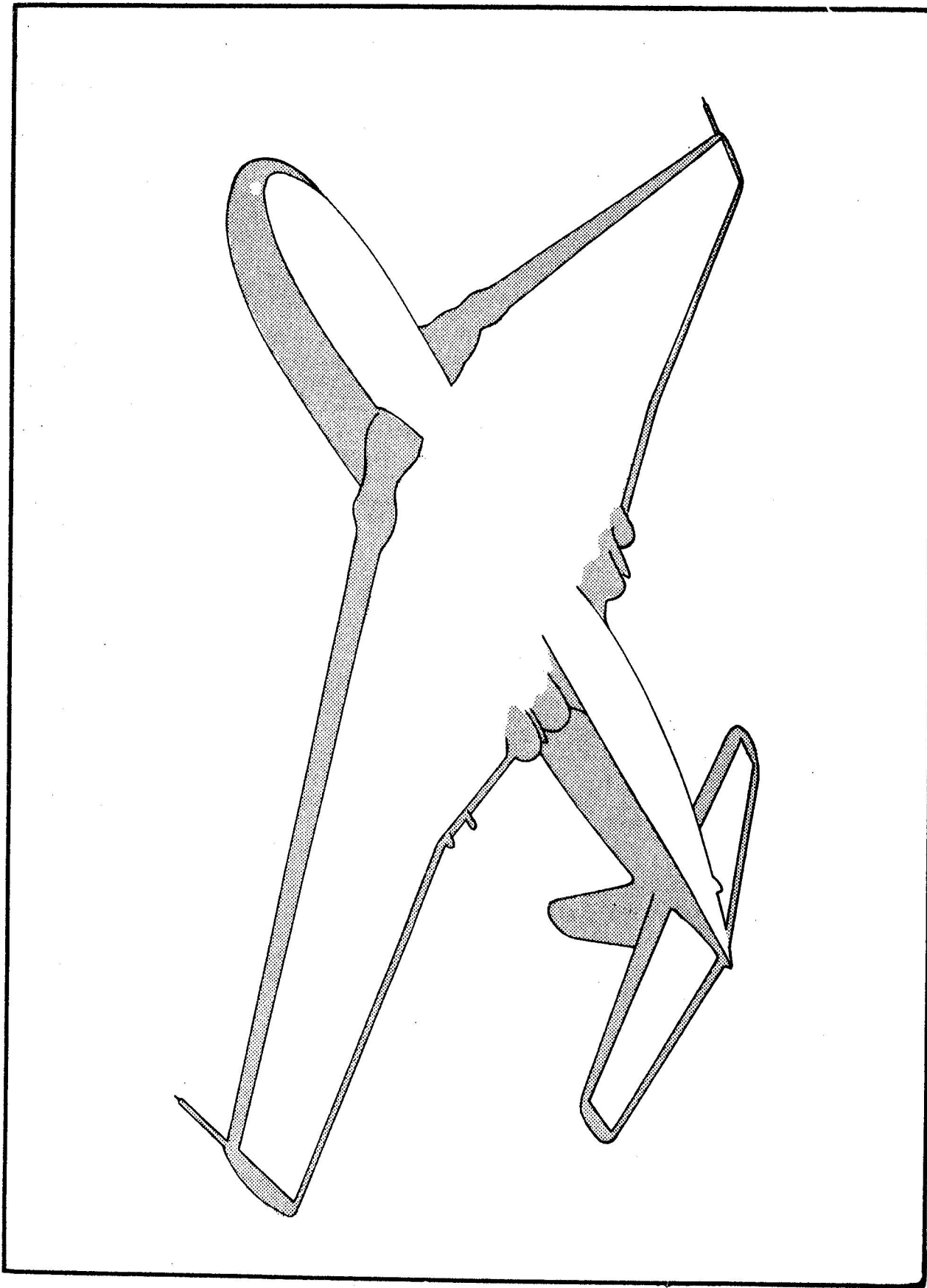


Figure 3 A Typical Aircraft Showing the Area that Shall be Left Clear

(g) Tires - At the discretion of the unit engineering officer tires may be covered with Spraylat as follows:-

- (1) Tires must be thoroughly cleaned and dried before spraying.
- (2) Make up the following solution:

Spraylat SC1074B-1 (40D/8/8030-21-801-9837) - 5 parts
Water - 1 part

- (3) With the aircraft jacked clear of the floor spray the above solution into the treads and sidewalls in sufficient number of coats to obtain a dry film at least 8 mil thick. Allow each coat to dry thoroughly before applying the succeeding coat. After the required thickness has been obtained brush on undiluted Spraylat to fill in the gap at the tire to rim junction.
- (4) The dried coating has sufficient strength to remain intact when the aircraft is rolled along the ground. It will tear off if the aircraft is taxied or braked suddenly.

PROTECTION OF AIRCRAFT - OUTDOOR STORAGE

14 Additional protection is required for aircraft being stored outdoor, This additional protection is provided by a cover coat of Coverlac SC247 (40D/8/8030-21-801-9836 - US Specification MIL-C-006799B (Aero) Type 2, Class 3) (White) which is sprayed over the Spraylat film.

- (a) Prepare aircraft as for indoor storage, see paras. 12 and 13.
- (b) Spray the entire Spraylat film with two coats of undiluted Coverlac SC247 (40D/8/8030-21-801-9836) for a total Coverlac film thickness of 2 to 4 mil.

MARKING

15 The aircraft number and date shall be clearly stencilled on each side of the aft section of the fuselage.

PROTECTION OF METAL SHEET AND STOCK

16 High finish unpainted metal sheet and stock may be protected with a film of Coverlac SC224 (40D/8/8030-21-802-2083) sprayed to a dried film thickness of approximately 6 mil. The protective film of Coverlac SC224 (40D/8/8030-21-802-2083) may be left on while cutting, forming, machining or drilling the sheet or stock, to protect it against scratches, dirt, grease, etc.

APPLICATION

17 Apply Coverlac SC224 as follows:-

- (a) Prepare Coverlac SC224 (40D/8/8030-21-802-2083) for spraying as outlined in para. 10.
- (b) Clean all sheet or stock before spraying. Remove all traces of light corrosion and clean and arrest moderate or severe corrosion. Refer to EO 05-1-3/23.
- (c) Using the spraying technique outlined in para. 11, cover the metal sheet or stock with a film of Coverlac SC224 (40D/8/8030-21-802-2083) approximately 6 mil thick.
- (d) Coverlac compounds SHALL NOT be used on painted or lacquered sheet or stock metals. Use Spraylat "A" (40D/8/8030-31-801-8527, US Specification MIL-C-006799B (Aero) Type 1), for protection of painted or lacquered metal sheets or stock.

- (e) To prevent the Coverlac films from adhering to each other, while in storage, dust each sheet liberally with Talc-dusting Powder 33C/11 or any approved tire talc.

PROTECTION OF PLASTICS

18 Plastic sheets, stock or formed plastic, that is not already factory covered with masking paper or a strippable coating, may be protected with a film of Spraylat "A" (40D/8/8030-21-801-8527, US Specification MIL-C-006799B (Aero) Type 1, Spraylat "A" (40D/8/8030-21-801-8527) may be used to protect aircraft canopies against abrasives, grease and oil while the aircraft is undergoing inspection or repair.

APPLICATION

19 Apply Spraylat "A" as follows:-

- (a) Prepare Spraylat "A" (40D/8/8030-21-801-8527) for spraying as outlined in para. 9.
- (b) Clean the plastic and polish if required. Refer to EO 110-35-2B and EO 05-1-3/23.
- (c) Using the spraying technique outlined in para. 11, cover the plastic with a film of Spraylat "A" (40D/8/8030-21-801-8527) approximately 6 mil thick.

PROTECTION OF ELECTRONIC EQUIPMENT

20 Spraylat SC1074B-1 (40D/8/8030-21-801-9837, US Specification, MIL-C-006799B (Aero) Type 2, Class 1) or Spraylat "A" (40D/8/8030-21-800-8527, US Specification MIL-C-006799B (Aero) Type 1), may be used to protect electronic equipment, held in storage, against dust or foreign matter from entering the cabinet or case.

- (a) Prior to spraying ensure that the cabinet or case is clean and that all openings are masked to prevent any spray from entering the cabinet and lodging on the internal mechanism.
- (b) For protection against dust and foreign matter Spraylat SC1074B-1 (40D/8/8030-21-801-9837) may be used.
- (c) For protection of the finish of the cabinet or case against scratches or other handling hazards, as well as dust and foreign matter, the tougher more durable Spraylat "A" (40D/8/8030-21-801-8527) may be used.
- (d) Using the spraying technique outlined in para. 11, cover the cabinet or case with a film of Spraylat approximately 6 mil thick.