

MIL-W-5050A(ASG)

31 JANUARY 1958

Superseding

MIL-C-5050

3 July 1950

MILITARY SPECIFICATION

WALKWAY, COATING AND MATTING, NONSLIP, AIRCRAFT,
APPLICATION OF

This specification has been approved by the Department
of the Air Force and by the Navy Bureau of Aeronautics.

1. SCOPE

1.1 Scope.-- This specification provides instructions for the application of smooth and rough walkway coatings and walkway matting to wingwalks of aircraft.

1.2 Classification.-- Walkway coatings shall be of the following types, and shall be applied as specified:

- Type I - Coating, smooth (without grit) applied by a brush or spray, as specified (see 4.1).
- Type II - Coating, rough (with grit) applied by brush or spray, as specified (see 4.2).
- Type III - Matting (for use with liquid adhesive) applied with separate liquid adhesive (see 4.3).

2. APPLICABLE DOCUMENTS

2.1 The following specifications, of the issue in effect on date of invitation for bids, form a part of this specification to the extent specified herein:

SPECIFICATIONSFederal

TT-H-261 Methyl-Ethyl-Ketone (for Use in Organic Coatings)

Military

MIL-W-5044	Walkway, Coating and Matting, Nonslip, Aircraft
MIL-A-5092	Adhesive, Rubber (Synthetic and Reclaimed Rubber Base)
MIL-P-6808	Primer Coating, Zinc Chromate, for Aircraft Use;
	Application of
MIL-C-8507	Coating, Wash Primer (Pretreatment), for Metals;
	Application of
MIL-C-8514	Coating, Pretreatment, Smooth Finish, Spray Type
	(for Aircraft)
MIL-P-8585	Primer Coating, Zinc Chromate, Low-Moisture Sensitivity

(Copies of specifications, standards, drawings, and publications required by contractors in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.)

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3. EQUIPMENT

3.1 Dispensing containers.-- To minimize losses caused by solvent evaporation, walkway coating materials should be dispensed in adequately protected small containers.

3.2 Spraying equipment.-- When spray application is specified, walkway coating material shall be sprayed by suitable spraying equipment, comparable to a Binks No. 19 spray gun with a No. 66 fluid tip, or a DeVilbiss IDC spray gun with an E fluid tip and No. 30 air cap.

4. MATERIALS

4.1 Coating, smooth.-- Smooth walkway coating conforming to type I of Specification MIL-W-5044 is used along leading edges and adjacent surfaces of aircraft where the roughness of type II walkway coating material is undesirable because of aerodynamic considerations. In the case of high-speed aircraft, type I material shall be employed on the entire wingwalk surface.

4.2 Coating, rough.-- Rough walkway coating conforming to type II of Specification MIL-W-5044 is used along trailing edges and adjacent surfaces in cases where maximum nonslip qualities are essential.

4.3 Matting.-- Walkway matting conforming to type III of Specification MIL-W-5044 is used where minimum waiting period is desired, and when maximum nonslip and wear-resistance are required.

4.3.1 Matting is not suitable for application on surfaces containing projections, such as raised rivets, or on wing areas containing compound curvatures.

5. PREPARATION OF SURFACE

5.1 Priming.-- The surface to which the walkway coating is to be applied shall first be coated with wash primer conforming to Specification MIL-C-8514. Application of the wash primer shall be in accordance with Specification MIL-C-8507. The primed surface shall then be coated with two coats of zinc-chromate primer conforming to Specification MIL-P-8585, applied in accordance with Specification MIL-P-6808.

5.2 Masking.-- The surface to be coated shall be masked off in accordance with the insignia and markings drawing for the airplane.

5.3 Condition of surface.-- The surface to which walkway material is to be applied shall be clean and free from oil, grease, dirt, or other foreign matter.

6. PROCEDURE WITH WALKWAY COATING

6.1 Thinning.-- Walkway coating materials shall, in general, be applied unthinned. In the event that the viscosity of the walkway coating material increases beyond the point of satisfactory application, the material shall be capable of being thinned to a suitable consistency with solvents covered by Government specifications.

6.2 Stirring.-- The walkway material shall be stirred before being placed in dispensing containers, in order to insure a homogeneous mixture.

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6.3 Temperature.- Although this specification does not attempt to control the application and drying temperatures, it should be kept in mind that temperatures within the range of 16° to 32°C (60° to 90°F) will produce satisfactory and reproducible results.

6.4 Application of materials.-

6.4.1 Spray pressures.- Spray pressures shall be adjusted to give optimum sprays with the equipment utilized. For the Binks No. 19 spray gun, tank pressures of 10 to 15 psi and atomization pressure of 50 to 60 psi are suggested; for the DeVilbiss MFC gun, a line air pressure of 30 psi, and a cup pressure of 8 psi give good results.

6.4.2 Weight of coating.- The walkway shall be applied in sufficient quantity to produce a dry weight of from 15 to 20 ounces per square yard with the smooth coating, and 20 to 25 ounces per square yard with the rough coating. When the material is applied by brush, it is suggested that not more than two coats be applied and allowed to dry. In spraying, the spray gun should be held comparatively close to the surface.

6.4.3 Initial coat.- A thin uniform brush or spray coat shall be applied and allowed to dry. In spraying, the spray gun should be held comparatively close to the surface.

6.4.4 Successive coats.- Successive coats shall be applied in liberal quantities, brushing or spraying the walkway material out quickly on a relatively small area at a time. Brushing or spraying over the same wet area after it has once been brushed out shall be avoided. Each coat shall be allowed to dry prior to recoating.

6.5 Drying times.-

6.5.1 After each coat.- Each application of walkway material shall be allowed to dry with a minimum drying time of 1/2 hour.

6.5.2 After final coat.- The finished walkway shall be allowed to air dry until set to touch before handling. (Note: Full hardness is attained within maximum drying time of 24 hours.)

6.6 Sanding.- All edges of the walkway shall be sanded to insure that they fair in smoothly with adjacent finished areas. Walkways shall not be polished or waxed.

6.7 Quality control.- Periodic checks shall be made to insure that the brushing or spraying technique and number of coats applied are producing walkway coatings within the specified weight, and having the requisite flexibility and adhesion, by means of a test panel coated simultaneously with the production work and employing identical application techniques. Flexibility and adhesion tests shall be conducted in accordance with test titled "Flexibility and adhesion (type I and II)" of Specification MIL-W-5044.

7. PROCEDURE WITH MATTING

7.1 Atmospheric conditions at bonding.- All bonding operations shall take place at a temperature between 21° and 32°C (70° and 90°F) and at relative humidities between 50 and 65 percent.

7.2 Application of material.- The surface to which the walkway matting material is to be applied shall be coated with two brush coats of adhesive conforming to Specification MIL-A-5092, Type III. Sufficient time shall be allowed for the adhesive to dry after each coat. The adhesive coating shall then be wetted with a small amount of methyl-ethyl-ketone conforming to Specification TT-M-261, and when tacky, the surface shall be bonded with the matting and rolled down with a 2-pound roller.

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7.3 Weight.-- The weight of the walkway matting, including the waight or the specified adhesive, shall be not more than 30 ounces per square yard.

7.4 Thickness.-- The thickness of the walkway matting shall be not more than 0.032 inch.

7.5 Sanding.-- All edges of the walkway shall be sanded to insure that they fair in smoothly with adjacent finished areas. Walkways shall not be polished or ~~traced~~.

7.6 Quality control.-- Periodic checks shall be made to insure that the application techniques are producing walkway matting within the specified weight and thickness, and having the requisite adhesion, by means of a test panel matted simultaneously with the production work and employing identical application techniques. Adhesion tests shall be conducted in accordance with test titled "Adhesion (type III)" of Specification MIL-W-5044.

8. MAINTENANCE

8.1 Spray guns.-- Spray guns should be cleaned frequently with a suitable solvent.

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