

MATERIALS / COATINGS

FNHA-2-H-501.00

TABLE 1 - ZINC PHOSPHATE REQUIREMENTS

Specification Number FNHA-2-H-501.	Part Number	Mass (Min) Zinc Phosphate		Min. Coating Thickness		Supplemental Treatment	Min. Hrs of Corrosion Resistance Red Corrosion
		g/m ²	mg/ft ²	um	Inches		
.01	86508339	11	1000	5	0.0002	NONE	4
.02	86508340	11	1000	5	0.0002	OIL	48
.03	86508341	11	1000	5	0.0002	WAX	72

5. REQUIREMENTS

5.1 CLASSIFICATION.

This specification provides a zinc phosphate coating with two (2) supplemental treatments as shown in Table 1.

5.2 CLEANING.

Before zinc phosphate conversion coating, the parts shall be thoroughly cleaned and free from rust, scale, oil and any other foreign matter which would be detrimental to the finish or adhesion of the coating. Particular care should be taken in the cleaning operation to prevent hydrogen embrittlement of parts exposed to high stress in service, prior heat treatment or cold working. It is recommended that the appropriate practices be used: ASTM B 183, ASTM B 242, and ASTM B 320.

5.3 ZINC PHOSPHATE

5.3.1 CONVERSION COATING THICKNESS.

The minimum zinc phosphate conversion coating shown on Table 1 is required on all significant surfaces. The non-significant surfaces shall have a minimum of at least one-half (1/2) of the minimum required thickness of the significant surface.

Definition: Significant Surface: Surfaces which are visible and are susceptible to corrosion on which zinc phosphate conversion coating is a necessary function, unless otherwise specified on Engineering drawings or standards. In general, the portion of the visible surface on the part which can be touched by a 20mm (0.75 inch) diameter sphere. Sharp edges are excluded.

5.3.2 MAXIMUM ZINC PHOSPHATE CONVERSION COATING THICKNESS FOR THREADS ON FASTENERS.

The maximum allowable thickness of zinc phosphate conversion coating applied to the threaded surface is described on Table II. The location of this thickness shall be measured at one (1) diameter from the threaded end of the fastener and at one-half (1/2) the tooth height of the thread. Internal threaded parts having a hole depth greater than 6mm (0.25 inches) need not meet the requirements of the threaded portion unless otherwise specified on the Engineering drawing or standard. When the fasteners are assembled, both the external and internal threaded parts must run freely in their intended use.

5.4 CORROSION RESISTANCE.

Zinc phosphate conversion coating on all significant surfaces except for sharp edges shall be capable of withstanding the neutral salt spray testing for the minimum number of hours specified in Table I. Non-significant surfaces shall withstand the neutral salt spray testing for one-half (1/2) the minimum required time on significant surface.

5.5 MASS OF ZINC PHOSPHATE COATING

The zinc phosphate coating mass shall be determined on panels or actual parts as per procedure described in methods of test. The mass shall meet the minimum requirements in Table 1.

	NAME				PART NUMBER	
	STD ZINC PHOSPHATE				86508306	
ENGINEERING SPECIFICATION				REV. D	FRAME 2	OF 5