

Spray equipment shall be kept clean so that dirt, dried paint and other foreign materials are not deposited in the paint film. Any solvent left in the equipment shall be completely removed before using.

Paint shall be applied in a uniform layer with overlapping at the edges of the spray pattern. The border of the spray pattern shall be painted first; with the painting of the interior of the spray pattern to follow, before moving to the next spray pattern area. A spray pattern area is such that the gun shall be held perpendicular to the surface and at a distance which will ensure that a wet layer of paint is deposited on the surface. The trigger of the gun should be released at the end of each stroke. All bolts and rivet heads shall be sprayed from at least 2 directions or brushed to assure coverage. Flange edges should be striped

If mud cracking occurs, the affected area shall be cleaned to bare metal in accordance with surface preparation above and repainted.

All gaps and crevices 1/8 inch (3 mm) or less shall be filled with primer.

All spray equipment used shall be suitable for use with the specified paint. Paint manufacturer's equipment recommendations shall be followed to avoid paint application problems.

If air spray is used, traps or separators shall be provided to remove oil and condensed water from the air. The traps or separators must be of adequate size and must be drained periodically during operations. The following test shall be made by the Contractor and verified by the Engineer to insure that the traps or separators are working properly.

Air shall be blown from the spray gun for 30 seconds onto a white cloth or blotter held in a rigid frame. If any oil, water or other contaminants are present on the cloth or blotter, painting shall be suspended until the problem is corrected and the operation is verified by repeating this test.

This test shall be made at the start of each shift and at 4 hour intervals. This is not required for an airless sprayer.

Spray application of all coats shall not be used unless the operation is totally enclosed to prevent overspray damage to the ground, public and private property, any and all vegetation, streams, lakes, etc. This containment shall be accomplished with tarps, plywood or other shields. If brush is used, more than one coat may be necessary to produce the required thickness.

**C. Application Approval.** The beginning of the application of each of the three different coats shall be subject to inspection and approval to detect any defects which might result from the Contractor's methods. If defects are discovered, the

Contractor shall make all necessary adjustments to his method of application to eliminate them before proceeding with coat application.

**D. Temperature.** Paint shall not be applied when the temperature of the air, steel, or paint is below 50° F (10° C). Paint shall not be applied when the steel surface temperature is expected to drop below 50° F (10° C) before the paint has cured for the minimum times specified below:

	50° F (10° C)	60° F (16° C)	70° F (21° C)
Primer	4 hrs.	3 hrs.	2 hrs.
Intermediate	6 hrs.	5 hrs.	4 hrs.
Finish	8 hrs.	6 hrs.	4 hrs.

The above temperatures and times shall be monitored with the recording thermometer.

A heated enclosure may be used. The heat within the enclosure may be supplied by any means which will maintain the required temperature continuously and uniformly in all parts of the enclosure. The heat will be supplied as required to maintain the required minimum temperature until the coating has cured.

If combustion type heating units are used, they will be vented away from the enclosure, and exhaust fumes will not be permitted to enter the enclosure. No open combustion of any kind will be permitted in the enclosure.

**E. Moisture.** Paint shall not be applied when the steel surface temperature is less than 5° F (3° C) above the dew point. Paint shall not be applied to wet or damp surfaces or on frosted or ice-coated surfaces. Paint shall not be applied when the relative humidity is greater than 85%. Paint shall not be applied during rain, fog or mist unless the above moisture criteria is met.

**F. Repair Procedures.** Damaged areas, and areas which do not comply with the requirements of this specification, shall have the paint removed and all defects corrected. The steel should then be retextured to a near white condition to produce a profile of between 1.5 to 3.5 mils (40 to 90 µm). This profile should be measured immediately prior to the application of the prime coat to insure that the profile is not destroyed during the feathering procedure.

The existing paint should be feathered to expose a minimum of ½ inch (13 mm) of each coat.

During the re-application of the paint, care shall be used to insure that each paint coat is applied only within the following areas. The prime coat shall only be applied