

ALDOT-443
METHOD FOR LABORATORY TESTING AND FINGERPRINTING COATING
SYSTEMS FOR STRUCTURAL STEEL

1. Scope

1.1 This procedure provides a method to test and fingerprint material used for coating systems for structural steel using test methods described below.

2. Applicable Documents

2.1 ASTM D 2698 – Standard Test Method for Determination of the Pigment Content of Solvent-Reducible Paints by High-Speed Centrifuging

2.2 ASTM D 1475 – Standard Test Method for Density of Liquid Coatings, Inks, and Related Products

2.3 ASTM D 2369 – Standard Test Method for Volatile Content of Coatings

2.4 ASTM D 562 – Standard Test Method for Consistency of Paints Measuring Krebs Unit (KU) Viscosity Using a Stormer-Type Viscometer

2.5 ASTM D 1640 – Standard Test Method for Drying, Curing, or Film Formation of Organic Coatings at Room Temperature

2.6 ASTM D 4400 – Standard Test Method for Sag Resistance of Paints Using a Multinotch Applicator

2.7 ASTM D 2621 – Standard Test Method for Infrared Identification of Vehicle Solids from Solvent-Reducible Paints

3. Procedure

A sample of the material used for each coat of the structural steel coatings system taken in the field is sent to the central laboratory for evaluation using the standard methods referenced in 2.1 through 2.7 above. The results of this evaluation are then compared to the original certified test report submitted by the manufacturer upon qualification of the paint system. The results of these samples must be within the limits of Table 1, Specification Acceptance, to be considered acceptable.

4. Specification Acceptance

4.1 Table 1

PROPERTY	TEST METHOD	SPECIFICATION ACCEPTANCE¹
Pigment Content	ASTM D 2698	Target Value \pm 2.0%
Density	ASTM D 1475	Target Value \pm 0.25 lbs/gal.
Solids Content	ASTM D 2369	Target Value \pm 2.0%
Non-Volatile in Vehicle Content	ASTM D 2698	Target Value \pm 2.0%
Viscosity, Ku	ASTM D 562	Target Value \pm 5 Ku
Dry to Touch	ASTM D 1640	Target Value \pm 10%
Dry Through	ASTM D 1640	Target Value \pm 10%
Sag Resistance	ASTM D 4400	Target Value \pm 10%
Infrared Spectrum	ASTM D 2621	²
¹ Target Value shall be established by the Materials Section upon qualification of the paint system.		
² Standards for infrared spectrum shall be kept on file and compared to project samples for acceptance purposes.		

5. Reporting

5.1 All data shall be reported using the Site Manager System.