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WEST VIRGINIA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS MATERIALS CONTROL, SOILS AND TESTING DIVISION

MATERIALS PROCEDURE

| PAINT TESTING METHODS | | | | |
|-----------------------|---|--|--|--|
| 1.0 | PURPOSE | | | |
| 1.1 | To set forth the standard test methods to be used in analyzing paint. | | | |
| 2.0 | SCOPE | | | |
| 2.1 | This procedure replaces the following Materials Procedures. | | | |
| 2.1.1 | MP 708.00.20 through 708.00.27 | | | |
| 2.1.2 | MP 708.01.20 through 708.01.29 | | | |
| 2.1.3 | MP 708.02.20 through 708.02.29 | | | |
| 2.1.4 | MP 708.03.20 through 708.03.29 | | | |
| 3.0 | REFERENCES | | | |
| 3.1 | American Society for Testing and Materials (ASTI) Section 6, Paint. | | | |
| 3.2 | Federal Test Method Standard Number 141B. | | | |
| 4.0 | TESTING METHODS | | | |
| 4.1 | Table I contains the following information: | | | |
| 4.1.1 | Test | | | |
| 4.1.2 | Reference | | | |
| 4.1.3 | Test Method Number | | | |

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| 5.0 | GENERAL INFORMATION |
|-------|--|
| 5.1 | Adhesion (Film thickness greater than 125 μm) 3.1 D3359 (Method A) |
| | Adhesion (Film thickness 125 µm or less) 3.2 D3359 (Method B) |
| 5.2 | Test Panel Preparation |
| 5.2.1 | Panels for testing shall meet the requirements of Federal Test Method 2011. |
| 5.2.2 | All coatings shall be applied at the normal field application thickness. Primers will be applied over panels which have been cleaned to a near white (SA 2-1/2) condition. All coatings which are part of a coating system shall be applied over the previous coating in the system. |
| 5.3 | Curing Conditions |
| 5.3.1 | All coatings except zinc primers shall be cured seven days prior to testing. The curing will be done in the laboratory under normal laboratory conditions of temperature and humidity. |
| 5.3.2 | Zinc primers shall be cured as in 5.3.1 except the cure period will be 10 days. |
| 5.3.3 | All coatings which require chemical resistance testing will be cured an extra 24 hours at 105-110°C. |
| 5.4 | Chemical analyses of pigments shall be conducted by ASTI test methods. In cases where no ASTI is available, Federal test methods or a mutually agreed to procedure shall be used. |
| 5.5 | Any test method not included in Table I shall be conducted according to ASTI, Federal Test or mutually agreed to procedures. |

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Initial approval of a paint requires all specified tests be conducted. Subsequent batches, at the Division's option, may have randomly selected tests conducted. 5.6

> Gary L. Robson, Director Materials Control, Soils and Testing Division

GLR:p

Attachment

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TABLE I

| Test | | Reference | Test Method |
|------|---|-----------|---------------------|
| 1. | Density (Weight/Gallon) | 3.1 | D 1475 |
| 2. | Consistenty (Viscosity) | 3.1 | D 562 |
| 3. | Drying Time | - 3.1 | D1640 |
| 4. | Drying (Traffic Paint-No Pick Up) | 3.1 | D 711 |
| 5. | Pigment - Vehicle | 3.2 | 4021 |
| 6. | Total Solids | 3.1 | D 2369 |
| 7. | Nonvolatile Vehicle | 3.2 | 4051 |
| 8. | Coarse Particles | 3.1 | D 185 |
| 9. | Fineness of Grind | 3.1 | D 1210 |
| 10. | Flexibility | 3.2 | 6221 |
| 11. | Condition in Container | 3.2 | 3011 |
| 12. | Water | 3.2 | 4081 |
| 13. | Color | 3.1 | D 2244 |
| 14. | Working Properties | 3.2 | 4541, 4321, 4331 |
| 15. | Compatibility | 3.2 | 4203 |
| 16. | Storage Stability | 3.1 | D 1849 |
| 17. | Specular Gloss (60°) | 3.1 | D 523 |
| 18. | Skinning | 3.2 | 3021 |
| 19. | Chemical Resistant (Spot Test) | 3.1 | D 1308 |

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| 20. | Infrared Scan | 3.1 | D 2621 |
|-----|-------------------------------|-------------|---------|
| 21. | Salt Spray | 3.1 | В 117 |
| 22. | Accelerated Weathering | 3.1 | G 53 |
| 23. | Leafing | 3.1 | D 480 |
| 24. | Adhesion | Section 5.1 | This MP |
| 25. | Chemical Analysis of Pigments | 3.1 | This MP |
| 26. | Sampling | 3.1 | D 3925 |
| | | | |