This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.

Designation: D913 – 20

Standard Practice for Evaluating Degree of Pavement Marking Line Wear[1]

This standard is issued under the fixed designation D913; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This practice covers the evaluation of degree of resistance to wear that may occur with pavement markings in road tests (see Practice D713) or in actual service, using photographic standards for comparative evaluation.

1.2 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.3 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 *ASTM Standards:*[2]

D713 Practice for Conducting Road Service Tests on Fluid Traffic Marking Materials

3. Terminology

3.1 *Definitions of Terms Specific to This Standard:*

3.1.1 *failure, described by these photographic references, n*—that condition manifested in pavement markings by actual detachment of sections of the film from its substrate or erosion of sections of the marking down to the substrate.

3.1.1.1 *Discussion*—The degree of resistance to failure is judged by the area of substrate that is covered by the pavement marking.

3.1.2 *substrate, n*—the roadway surface or previously applied traffic marking over which the pavement marking being tested was applied.

4. Significance and Use

4.1 This practice is designed to evaluate the resistance to wear of a pavement marking. It should be noted that a high degree of wear resistance of pavement marking applied to a bare pavement surface may not guarantee similar results when the same pavement marking is applied over old markings.

5. Type of Failure

5.1 The failure as described in Section 3 does not presume any specific mechanism, and all areas where the substrate is visible shall be considered a failure.

6. Use of Photographic References

6.1 The photographic references that are part of this practice are representative of pavement markings showing the degrees of resistance to wear. The percentage of the pavement surface covered by the marking is shown on each reference (Fig. 1).

6.1.1 The degree of resistance to wear is likely to vary over any given area. For example; for transverse markings it is likely that you will see more wear of the pavement marking within the wheel paths compared to the areas of the pavement marking that fall outside or between the wheel paths, it is therefore preferable to use one of the following grading methods:

6.1.1.1 Select an area as representative and base the relative performance of the pavement marking on this area or

6.1.1.2 Grade segments of the pavement marking and average these gradings.

7. Procedure

7.1 Compare the representative areas of the pavement marking with the photographic references and estimate the percent of intact film based on the photographic standards that most closely represent the area of the pavement marking being evaluated.

8. Report

8.1 Report the mean and range of the substrate coverage estimations, if appropriate.

9. Keywords

9.1 durability; pavement markings; resistance to wear; traffic markings; traffic paint

[1] This practice is under the jurisdiction of ASTM Committee D01 on Paint and Related Coatings, Materials, and Applications and is the direct responsibility of Subcommittee D01.44 on Traffic Coatings.

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[2] For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

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Photographic Reference

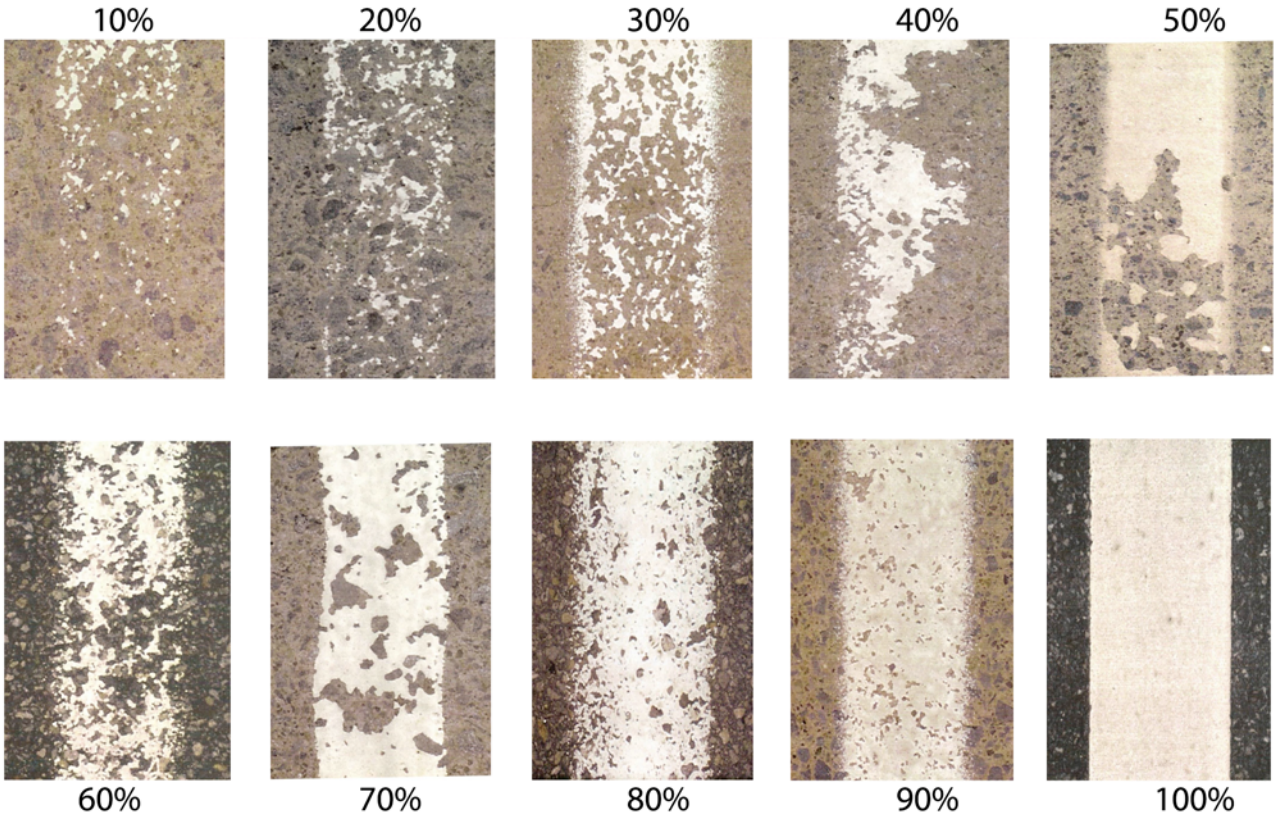

FIG. 1 Relative Percent of Substrate Covered

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