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: D6185 – 11 (Reapproved 2017)

Standard Practice for Evaluating Compatibility of Binary Mixtures of Lubricating Greases[1]

This standard is issued under the fixed designation D6185; 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 a protocol for evaluating the compatibility of one or three binary mixtures of lubricating greases by comparing their properties or performance relative to those of the neat greases comprising the mixture.

1.2 Three properties are evaluated in a primary testing protocol using standard test methods: (*1*) dropping point by Test Method D566 (or Test Method D2265); (*2*) shear stability by Test Methods D217, 100 000-stroke worked penetration; and (*3*) storage stability at elevated-temperature by change in 60-stroke penetration (Test Method D217). For compatible mixtures (those passing all primary testing), a secondary (nonmandatory) testing scheme is suggested when circumstances indicate the need for additional testing.

1.3 Sequential or concurrent testing is continued until the first failure. If any mixture fails any of the primary tests, the greases are incompatible. If all mixtures pass the three primary tests, the greases are considered compatible.

1.4 This practice applies only to lubricating greases having characteristics suitable for evaluation by the suggested test methods. If the scope of a specific test method limits testing to those greases within a specified range of properties, greases outside that range cannot be tested for compatibility by that test method. An exception to this would be when the tested property of the neat, constituent greases is within the specified range, but the tested property of a mixture is outside the range because of incompatibility.

1.5 This practice does not purport to cover all test methods that could be employed.

1.6 The values stated in SI units are to be regarded as standard. No other units of measurement are included in this standard.

1.7 *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.* For specific safety information, see 7.2.3.

1.8 *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]

D217 Test Methods for Cone Penetration of Lubricating Grease
D566 Test Method for Dropping Point of Lubricating Grease
D972 Test Method for Evaporation Loss of Lubricating Greases and Oils
D1092 Test Method for Measuring Apparent Viscosity of Lubricating Greases
D1263 Test Method for Leakage Tendencies of Automotive Wheel Bearing Greases (Withdrawn 2010)[3]
D1264 Test Method for Determining the Water Washout Characteristics of Lubricating Greases
D1403 Test Methods for Cone Penetration of Lubricating Grease Using One-Quarter and One-Half Scale Cone Equipment
D1478 Test Method for Low-Temperature Torque of Ball Bearing Grease
D1742 Test Method for Oil Separation from Lubricating Grease During Storage
D1743 Test Method for Determining Corrosion Preventive Properties of Lubricating Greases
D1831 Test Method for Roll Stability of Lubricating Grease
D2265 Test Method for Dropping Point of Lubricating Grease Over Wide Temperature Range

[1] This practice is under the jurisdiction of ASTM Committee D02 on Petroleum Products, Liquid Fuels, and Lubricants and is the direct responsibility of Subcommittee D02.G0.01 on Chemical and General Laboratory Tests.

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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.

[3] The last approved version of this historical standard is referenced on www.astm.org.

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