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: D2000 – 18

Approved by
Society of Automotive Engineers
SAE Recommended Practice J200

Standard Classification System for Rubber Products in Automotive Applications[1]

This standard is issued under the fixed designation D2000; 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.

This standard has been approved for use by agencies of the U.S. Department of Defense.

1. Scope

1.1 This classification system covers the properties of vulcanized rubber materials (natural rubber, reclaimed rubber, synthetic rubbers, alone or in combination) that are intended for, but not limited to, use in rubber products for automotive applications.

NOTE 1—This classification system may serve many of the needs of other industries in much the same manner as SAE numbered steels. It must be remembered, however, that this system is subject to revision when required by automotive needs. It is recommended that the latest revision always be used.

1.2 This classification system is based on the premise that the properties of all rubber products can be arranged into characteristic material designations. These designations are determined by *types*, based on resistance to heat aging, and *classes*, based on resistance to swelling in oil. Basic levels are thus established which, together with values describing additional requirements, permit complete description of the quality of all elastomeric materials.

1.3 In all cases where the provisions of this classification system would conflict with those of the detailed specifications for a particular product, the latter shall take precedence.

NOTE 2—When the rubber product is to be used for purposes where the requirements are too specific to be completely prescribed by this classification system, it is necessary for the purchaser to consult the supplier in advance, to establish the appropriate properties, test methods, and specification test limits.

1.4 The values stated in SI units are to be regarded as standard.

1.5 *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]

D395 Test Methods for Rubber Property—Compression Set
D412 Test Methods for Vulcanized Rubber and Thermoplastic Elastomers—Tension
D429 Test Methods for Rubber Property—Adhesion to Rigid Substrates
D430 Test Methods for Rubber Deterioration—Dynamic Fatigue
D471 Test Method for Rubber Property—Effect of Liquids
D573 Test Method for Rubber—Deterioration in an Air Oven
D575 Test Methods for Rubber Properties in Compression
D624 Test Method for Tear Strength of Conventional Vulcanized Rubber and Thermoplastic Elastomers
D865 Test Method for Rubber—Deterioration by Heating in Air (Test Tube Enclosure)
D925 Test Methods for Rubber Property—Staining of Surfaces (Contact, Migration, and Diffusion)
D945 Test Methods for Rubber Properties in Compression or Shear (Mechanical Oscillograph)
D1053 Test Methods for Rubber Property—Stiffening at Low Temperatures: Flexible Polymers and Coated Fabrics
D1149 Test Methods for Rubber Deterioration—Cracking in an Ozone Controlled Environment
D1171 Test Method for Rubber Deterioration—Surface Ozone Cracking Outdoors (Triangular Specimens)
D1329 Test Method for Evaluating Rubber Property—Retraction at Lower Temperatures (TR Test)
D1349 Practice for Rubber—Standard Conditions for Testing
D1418 Practice for Rubber and Rubber Latices—Nomenclature

[1] This classification system is under the jurisdiction of ASTM Committee D11 on Rubber and Rubber-like Materials and is the direct responsibility of Subcommittee D11.30 on Classification of Rubber Compounds.

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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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