



Designation: D6205 – 20

Standard Practice for Calibration of the James Static Coefficient of Friction Machine¹

This standard is issued under the fixed designation D6205; 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 testing of the James Machine for repeatability of static coefficient of friction, relative to a standard reference interface consisting of the working surfaces of Borco² board and standard leather shoe sole material, or a control polish film and standard leather shoe material. The practice provides basis data on the stability of the James Machine to ensure accurate static coefficient of friction determinations over time and repeated use and for determining if the James Machine is mechanically calibrated and properly aligned.

1.2 This practice is written specifically for James Machines with manual or motorized test table transport. Variations of this practice for the calibration of versions of James Machines which are semi-automated are obvious. Calibration practices suggested by the manufacturer of semi-automatic James Machines should be followed in preference to this practice.

1.3 *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.*

1.4 *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.*

¹ This practice is under the jurisdiction of ASTM Committee D21 on Polishes and is the direct responsibility of Subcommittee D21.06 on Slip Resistance.

Current edition approved June 15, 2020. Published July 2020. Originally approved in 1998. Last previous edition approved in 2012 as D6205- 12. DOI: 10.1520/D6205-20.

² Borco is a registered trademark for a Danish product imported into the United States by Sierra Group, a division of Wallace Leisure Products, Inc. Available from Papyro-Tex A/S, DK-2730, Herlev, Denmark; distributed in North America through drafting and office supply stores under the trade names “Borco,” “Vyco,” and “Altex” board covers.

The sole source of supply of Borco known to the committee at this time is Phipps’s Reprographics 6920 Plainfield Rd, Cincinnati, OH 45236. If you are aware of alternative suppliers, please provide this information to ASTM International Headquarters. Your comments will receive careful consideration at a meeting of the responsible technical committee,¹ which you may attend. See also: <https://www.thehcupa.org/resources/#1517763820809-cf4141f9-4ecb>.

2. Referenced Documents

2.1 ASTM Standards:³

D2047 Test Method for Static Coefficient of Friction of Polish-Coated Flooring Surfaces as Measured by the James Machine

D2825 Terminology Relating to Polishes and Related Materials

D4103 Practice for Preparation of Substrate Surfaces for Coefficient of Friction Testing

E29 Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications

E178 Practice for Dealing With Outlying Observations

2.2 Federal Specification:

KK-L-165C Leather, Cattlehide, Vegetable Tanned and Chrome Tanned, Impregnated, and Soles⁴

3. Terminology

3.1 *Definitions:* For general definitions, see Test Method D2047 and Terminology D2825.

3.2 Definitions of Terms Specific to This Standard:

3.2.1 *Borco, n*—special 5-ply vinyl drawing board cover.

3.2.2 *Borco/standard leather reference interface, n*—working interface consisting of the white side of the Borco material, mounted as described in this practice, and the standard leather shoe sole material, mounted on a precision shoe pad as described in Section 7 of Test Method D2047.

3.2.3 *control polish, n*—a reference polish of known or well established Static Coefficient of Friction, as determined by repeated determinations using Test Method D2047 over a long period of time and preferably by determinations on multiple James Machines.

3.2.4 *control polish/standard leather reference interface, n*—working interface consisting of a dried film of control polish, applied according to the procedures of Practice D4103 on standard vinyl composition tile, and the standard leather

³ 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.

⁴ Available from Standardization Documents Order Desk, Bldg 4 Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094, Attn: NPODS.