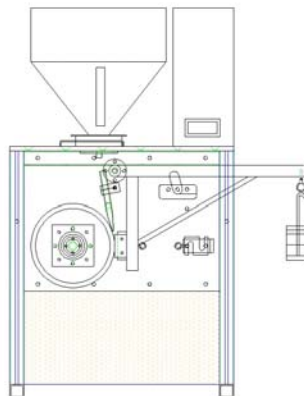


## **DRY SAND/RUBBER WHEEL ABRASION TEST FIXTURE**



Specimen:	Width	1.5"
	Thickness	Up to 0.25"
Fixture:	Construction	Aluminum, steel, stainless steel, acrylic, rubber
	Temperature	Ambient
	Mounting	Table top
	Capacity	10 - 30 lbs abrasion load
	Weight	400 lbs
	Dimensions	
	Standard	Manufactured in accordance with ASTM G65

### Model No ASTM.G0065.10 - Dry Sand/Rubber Wheel Abrasion Tester

The Dry Sand/Rubber Wheel Abrasion Tester is used to test the abrasive resistance of solid materials to abrasive dry sand compositions. The Abrasion Tester can be used for specimens constructed from metals, minerals, polymers, composites, ceramics, abrasives, and/or thick coatings. A rectangular specimen is loaded against a rotating rubber wheel and the controlled grit size sand is deposited at a steady flow rate between them. The rubber coating on the wheel is 60 durometer Shore A hardness. The wheel rotates in the same direction as the sand flows. The mass of the test specimen is taken before and after completing the test. The resultant mass loss due to dry sand abrasion with a rubber wheel is the difference between the two figures. The mass loss must be converted to volume loss to rate and compare the test results between different material specimens. This Dry Sand/Rubber Wheel Abrasion Tester allows for variable test load and sand composition. Includes (1) Steel/Rubber wheel with 60 Durometer Shore A Scale hardness rubber, specimen holder and lever arm - (multiplier arm to provide horizontal load) bench top housing, sand feed hopper, sand catcher, touch screen plc controller, and 50 lbs of abrasive to conduct testing in accordance with ASTM G65. Unit will be fabricated and furnished for laboratory use.

This Dry Sand/Rubber Wheel Abrasion Tester allows the user to rate the same solid materials/dry sand composition using mass loss or different materials/dry sand compositions using volume loss. Load 10 - 30 lbs

# **MODEL NO. ASTM.G0065.10**

## **ASTM, MEASURING, ABRASION, DRY, SAND,**

### **ACCESSORIES**

- ACC.G0065.1001 - 50 lb bag of AFS 50/70 Unground Silica Sand
- ACC.G0065.1002 - 1/2 Skid of 50 lb bags of AFS 50/70 Unground Silica Sand (25 bags)
- ACC.G0065.1003 - Full Skid of 50 lb bags of AFS 50/70 Unground Silica Sand (50 bags)
- ACC.G0065.1004 - New Wheel with silicone rubber periphery
- ACC.G0065.1005 - New Wheel with neoprene rubber periphery
- ACC.G0065.1006 - Cast Neoprene Rubber on Existing Wheel
- ACC.G0065.1007 - Cast Silicone Rubber on Existing Wheels
- ACC.G0065.1008 - Replacement Nozzle
- ACC.G0065.1009 - D-2 Calibration Block
- ACC.G0065.1010 - H-13 Calibration Block
- ACC.G0065.1011 - 4340 Calibration Block
- ACC.G0065.1012 - New Wheel with Chloro-butyl rubber periphery

### **SPARE PARTS**

Please contact us for replacement parts.

### **REFERENCE DOCUMENT AND TEST METHOD SCOPE:**

<http://www.astm.org/Standards/G65.htm>

ASTM G65 - 16

Standard Test Method for Measuring Abrasion Using the Dry Sand/Rubber Wheel Apparatus

1.1 This test method covers laboratory procedures for determining the resistance of metallic materials to scratching abrasion by means of the dry sand/rubber wheel test. It is the intent of this test method to produce data that will reproducibly rank materials in their resistance to scratching abrasion under a specified set of conditions.

1.2 Abrasion test results are reported as volume loss in cubic millimetres for the particular test procedure specified. Materials of higher abrasion resistance will have a lower volume loss.

NOTE 1: In order to attain uniformity among laboratories, it is the intent of this test method to require that volume loss due to abrasion be reported only in the metric system as cubic millimetres. 1 mm<sup>3</sup> = 6.102 × 10<sup>-5</sup> in<sup>3</sup>.

1.3 This test method covers five recommended procedures which are appropriate for specific degrees of wear resistance or thicknesses of the test material.

1.3.1 Procedure A—This is a relatively severe test which will rank metallic materials on a wide volume loss scale from low to extreme abrasion resistance. It is particularly useful in ranking materials of medium to extreme abrasion resistance.

1.3.2 Procedure B—A short-term variation of Procedure A. It may be used for highly abrasive resistant materials but is particularly useful in the ranking of medium- and low-abrasive-resistant materials. Procedure B should be used when the volume-loss values developed by Procedure A exceeds 100 mm<sup>3</sup>.

1.3.3 Procedure C—A short-term variation of Procedure A for use on thin coatings.

1.3.4 Procedure D—This is a lighter load variation of Procedure A which is particularly useful in ranking materials of low-abrasion resistance. It is also used in ranking materials of a specific generic type or materials which would be very close in the volume loss rates as developed by Procedure A.

1.3.5 Procedure E—A short-term variation of Procedure B that is useful in the ranking of materials with medium- or low-abrasion resistance.

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

Extracted, with permission, ASTM G65 Standard Test Method for Measuring Abrasion Using the Dry Sand/Rubber Wheel Apparatus, copyright ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428. A copy of the complete standard may be purchased from ASTM International, [www.astm.org](http://www.astm.org).

*Material Testing Technology*