



Association of Textile, Apparel & Materials Professionals

AATCC takes no position respecting the validity of any patent rights asserted in connection with any item mentioned in this test method. Users of this test method are expressly advised that determination of the validity of any such patent rights, and the risk of infringement of such rights, are entirely their own responsibility.

This test method is subject to revision at any time by the responsible technical committee and must be reviewed every five years and if not revised, either reaffirmed or withdrawn. Your comments are invited either for revision of this test method or for additional procedures and should be addressed to the AATCC Technical Center. Your comments will receive careful consideration at a meeting of the responsible technical committee, which you may attend. If you feel that your comments have not received a fair hearing, you should make your views known to Diana A. Wyman, Technical Director, at the address shown below.

This test method is copyrighted by AATCC, PO Box 12215, Research Triangle Park, NC 27709 USA. Individual reprints (single or multiple copies) of this method may be obtained by contacting AATCC at the above address or tel: 919-549-3526; fax: 919-549-8933, or e-mail: orders@aatcc.org.

AATCC License Agreement: This test method is copyrighted by the American Association of Textile Chemists and Colorists (AATCC), PO Box 12215, 1 Davis Drive, Research Triangle Park, NC USA. All rights reserved.

AATCC grants you a license as follows: The right to download one electronic file of this AATCC test method for temporary storage on one computer for purposes of viewing, and/or printing one copy of the AATCC test method for individual use. Neither the electronic file nor the hard copy print may be reproduced in any way. In addition, the electronic file may not be distributed elsewhere over computer networks or otherwise. The hard copy print may only be distributed to other employees for their internal use within your organization.

This test method is not for resale.

Dusting Propensity of Powder Dyes: Evaluation of

Developed in 1987 by Committee RA87; editorially revised and reaffirmed 1988, 1989 (title change), 1996; editorially revised 1992, 2004, 2008; reaffirmed 2001, 2006, 2011.

1. Purpose and Scope

1.1 This test method provides a standard method for the evaluation of dusting properties of powder dyes.

1.2 The method of assessment permits the assignment of a numerical rating describing the degree of dusting; or, conversely, the degree of non-dusting of powder dyes.

1.3 This test method is not intended for a quantitative determination of dusting. Water soluble dyes may give an inferior rating than an equal amount of dusting caused by disperse dyes. Further studies indicated that not all factors; i.e., humidity, are fully controlled. Also the method does not distinguish between slow and fast settling dust.

2. Principle

2.1 Three, approximately equal, weighed portions of a 10 g powder dye sample are dropped consecutively and rapidly into a funnel which has a wet filter paper collar on the stem and is fitted into a cylinder. Any dust which forms rises and settles on the pre-wet filter paper collar.

2.2 The resulting coloration on the filter paper is then compared to a series of five standards and a numerical rating is assigned.

3. Terminology

3.1 **dusting**, n.—the tendency of particles of sufficiently low mass to become airborne when a powder material is handled or agitated.

3.2 **dye**, n.—a colorant applied to or formed in a substrate, via the molecular dispersed state, which exhibits some degree of permanence.

4. Safety Precautions

NOTE: These safety precautions are for information purposes only. The precautions are ancillary to the testing procedures and are not intended to be all inclusive. It is the user's responsibility to use safe and proper techniques in handling materials in this test method. Manufacturers MUST be consulted for specific details such as material safety data sheets

and other manufacturer's recommendations. All OSHA standards and rules must also be consulted and followed.

4.1 Good laboratory practices should be followed. Wear safety glasses in all laboratory areas and a single-use dust respirator while handling powder dyes.

5. Apparatus and Materials

5.1 Funnel, 1.5 mm thick stainless steel, 110 mm diameter, 230 mm stem length with 15 mm stem diameter (see Fig. 1).

5.2 Cylinder, stainless steel, 50 mm diameter, 355 mm tall (approx. capacity

500 mL) with capability of grounding to prevent interference from static electricity (see 11.1).

5.3 Filter paper, Whatman No. 2, 39 mm diameter circle with 16 mm diameter center hole (see 11.1 and 11.2).

5.4 Pipettes, Pasteur.

5.5 Beakers, Griffin, 50 mL.

5.6 Photographic Scale for Rating (see 11.3, Fig. 2).

6. Preparation and Assembly

6.1 Slip a filter paper collar on the funnel stem and position it 100 mm from the bottom of the stem.

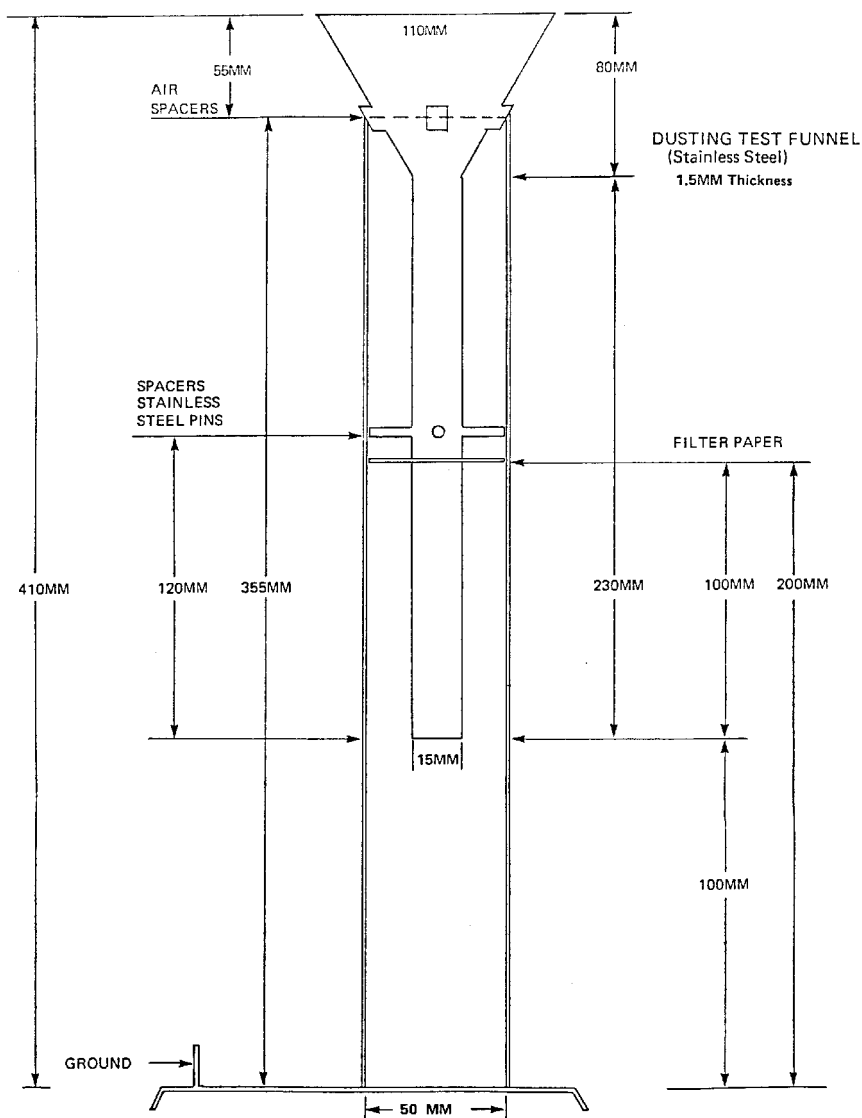


Fig. 1—Dusting test funnel.