



## ROTARY BROOM WAFER REFILL MGS 07-02B

**1.0 DESCRIPTION.** This specification covers rotary broom wafer refills composed of polypropylene bristles crimped into a metal retaining ring.

### **2.0 MATERIALS.**

**2.1 General.** Wafer refills shall be of the type designated in the bid request, designed to replace worn rotary broom wafer segments.

**2.1.1 Type I.** Type I shall be for use on rotary broom drums that require a metal spacer between wafer refills. Type I wafers shall have a flat (regular circular) metal retaining ring with a drive lug protruding into the inside diameter of the retaining ring.

**2.1.2 Type II.** Type II shall be for use on rotary broom drums that do not require a metal spacer ring between wafer refills. Type II wafers shall have a convoluted (irregular or sinusoidal circular) metal retaining ring with a drive lug protruding into the inside diameter of the metal retaining ring.

**2.2 Wafer Bristle Retaining Ring.** The bristle retaining ring shall be of a quality that will resist warping, bending, splitting or cracking. The retaining ring shall be formed from a minimum of 20 gauge premium grade steel coil stock into a circular ring with a "U" shaped cross section. The sides of the ring shall be crimped so that bristles are firmly held into position during use. The sides of the ring that form the shoulders (or channel) that contains the attachment end of the bristle filament shall be a minimum of  $\frac{3}{4}$ " tall and a minimum of 0.534" wide from outside edge to outside edge. The inside diameter of the retaining ring shall be 10" to  $10\frac{1}{8}$ ". The retaining ring shall have the standard drive lug protruding into the inside diameter of the metal retaining ring. The drive lug can be either a rectangular lug or steel pin lug. The rectangular lug shall be 20 gauge steel formed into a rectangle to produce a 1" long by  $\frac{1}{2}$ " tall drive lug that is welded onto the inside diameter of the retaining ring. The steel pin lug shall be at least one  $\frac{1}{4}$ " steel pin protruding a minimum of  $\frac{1}{2}$ " into the inside diameter of the ring.

### **2.3 Bristle Filament.**

**2.3.1** The bristle filament shall be constructed from polypropylene.

**2.3.1.1** The bristle filament shall have a Rockwell Hardness of "R" 95, and a tensile strength of 4,200 psi as determined by ASTM D 638.

**2.3.1.2** The bristle filament shall have a minimum weight of 2.15 lbs for a 32" wafer refill.

**2.3.1.3** The bristle filament shall have a specific gravity of 0.90, softening point of 240° F, water absorption  $\leq 0.03\%$ , completely resistant to mildew and chemically inert to oil, grease, acids and other common chemicals.

**3.0 SAMPLING.** At the discretion of the engineer two wafers will be selected at random of each size and type ordered and tested for compliance with this specification.

### **4.0 ACCEPTANCE.**

**4.1** The supplier shall furnish to the engineer a manufacturer's certification for each shipment



showing specific test results complying with the material and quality requirements of these specifications for each type of wafer being furnished.

**4.2** Acceptance of the wafers will be based on a satisfactory manufacturer's certification and tests deemed necessary by the engineer.

**4.3** If any of the requirements and/or specifications are not met, all wafers covered by the purchase order will be subject to rejection.

CERTIFICATION STATEMENT  
ROTARY BROOM WAFER REFILL

State Materials Engineer  
P. O. Box 270  
Jefferson City, Missouri 65102

Dear Sir:

We hereby certify that the rotary broom wafer refills described below comply with all requirements of Specification [MGS-07-02B](#) and in accordance with Bid Request No. \_\_\_\_\_.

The following broom refills manufactured by \_\_\_\_\_ are covered by this certification.

Purchase Order No.	Destination	Quantity & Size	Shipping Date

Following are results of test performed on these blades:

Rockwell Hardness \_\_\_\_\_  
Tensile Strength \_\_\_\_\_  
Bristle Filament Weight \_\_\_\_\_

Certified By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Results of tests may be shown on attachments rather than on this form, if preferred.

This form is to be completed, signed, and submitted in triplicate for each shipment, at the same time all items are shipped. A shipment is defined as all items represented on one certification and shipped on one date, regardless of various destinations.