



# LAB REPORT

## *ABRASION TEST RESULTS*

### **THE ABRASION TEST - A DESCRIPTION:**

The Abrasion test fixture consists of: (1) a platform supported by a shaft and bearings with 8 sample mounting plates bolted in place, (2) a standard 5/16" diameter sandblast gun fixed in position 1 1/2" from the edge of the sample mounting plates and canted to give a maximum angle of incidence of 30 degrees, (3) A mechanical brake to control platform, and (4) a standard sandblast cabinet. Crushed walnut shell, AD-3B (-12+20 mesh) is used as the blasting medium. Each 100 hour test is started with 50 pounds of new crushed shell and the same abrasive when fresh, is less abrasive after 100 hours of recirculation through the closed system consisting of: (A) striking the urethane sample, (B) falling into the collection hopper, (C) transport up the sandblast gun feed tube, then back to step (A). The compressed air which draws the crushed shell up the feed tube and blows the shell into the test samples is regulated to 85-90 PSI. Platform speed is maintained at a rate less than 200 RPM.

### **SAMPLE PREPARATION AND MEASUREMENT:**

Each sample, unless specified, is prepared by cutting a 4 1/2" x 4 1/2" square by which a 1/4" hole is then drilled for mounting purposes. The surface finish is not altered prior to the test. After the sample has been cut, drilled, and marked for identification, it is weighed using a laboratory quality balance beam scale.

### **COMPARATIVE TEST RESULTS:**

The following table reflects data obtained from samples which were provided from various plastic and urethane manufacturers. Each sample is referred according to its manufacturer, its color, and its durometer. When more than one sample was available for testing, the table shows the average weight loss and average percent weight loss of all samples tested. Sample entries are arranged from best (top of the table) to worst (bottom of table) with respect to percentage weight loss.



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Sample	Raw Weight Loss (g)	Weight Loss of Samples (%)
Kryptane Red 80A	No Loss	N.A.
*Bailey Parks Blue 89A	1.600	1.40
*Tivar 100 White	0.950	1.60
*Tivar 88 Blue 68D	1.500	2.20
*Tivarthane Black 88A	2.200	2.70
Rhino Hyde 88A	4.520	3.62

\* Sample Size = 4.5" x 4"

