

Adsil Technical Bulletin

Taber Abrasion Testing (03/05/04)

Adsil contracted with DL Laboratory to conduct testing using the standard ASTM D 4060 Taber Abrasion Test on several of its clear treatments and is hereby publishing the results (**Table 1**).

As a comparative, we are also showing the Taber Abrasion results on various high performance generic organic coatings taken from the published Technical Sheets of a nationally distributed paint brand (**Table 2**).

Taber Abrasion Testing, most simply stated, is the ability of a coating to withstand abrasive erosion. The film erosion measurement is determined by the milligrams of weight (film) loss when subjected to 1000 erosion cycles, with 500 grams of weight, using various abrasive wheels of varying degrees of aggressiveness. As an example, a CS-10 wheel is less aggressive than a CS-17 wheel and would erode less film per revolution (cycle). Taber Abrasion Testing does not measure a coating's ability to resist surface scratching, but it does measure film loss of a coating due to abrasive wear.

Table 1: MicroGuard® Clear Siloxane Treatments

Test Method	AD703 (Concrete)	AD708 (Hard Tile)	AD95 (NF Metals)	AD35 (HVAC/R)
ASTM D 4060 1000 cycles @ 500 grams applied weight	20.5 mg (loss) CS-17 Wheel (highly abrasive)	24.2 mg (loss) CS-17 Wheel (highly abrasive)	12.5 mg (loss) CS-10 Wheel	12.5 mg (loss) CS-10 Wheel

Table 2: High Performance Generic Organic Coatings

Test Method	Polyamide Epoxy	Amine Adduct Epoxy	Aliphatic Urethane	Urethane/ Alkyd
ASTM D 4060 1000 cycles @ 500 grams applied weight	40.0 mg (loss) CS-10 Wheel	40.0 mg (loss) CS-10 Wheel	35.0 mg (loss) CS-10 Wheel	120.0 mg (loss) CS-10 Wheel

Taber Abrasion Testing is a very good method for determining overall film durability and is particularly well suited for measuring the wear-ability of floor coatings, which are constantly subjected to foot & forklift traffic or the wear-ability of other types of abrasive exposures for vertical surface coatings. As can be clearly observed, **MicroGuard®** Clear Siloxane Treatments exhibit superior abrasion resistance and can be used with great confidence, even against competitive, high performance industrial coatings.