

Gentoo Adhesion/Cured Testing

Through extensive testing, UltraTech has determined there are three simple tests that can be performed to determine if Gentoo is adequately hydrolyzed and cured to yield optimum performance.

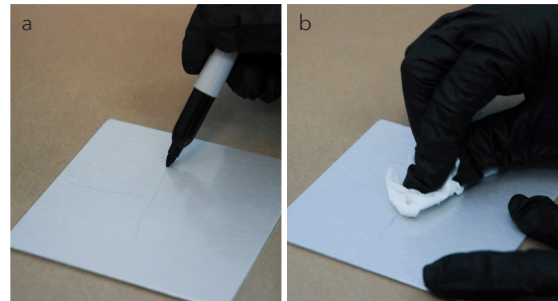
1. Sharpie® Marker Test

Place the fully cured Gentoo coated item on a clean, flat surface with good lighting.

(a) Draw one horizontal line and one perpendicular line on the item to be tested using a fine point Sharpie® Permanent Marker.

(b) Attempt to wipe off the two marks using a dry cloth or paper towel.

The marks will be completely removed from a properly coated and cured item.



2. Acetone Test

NOTE: This test is best performed on a flat item coated with Gentoo.

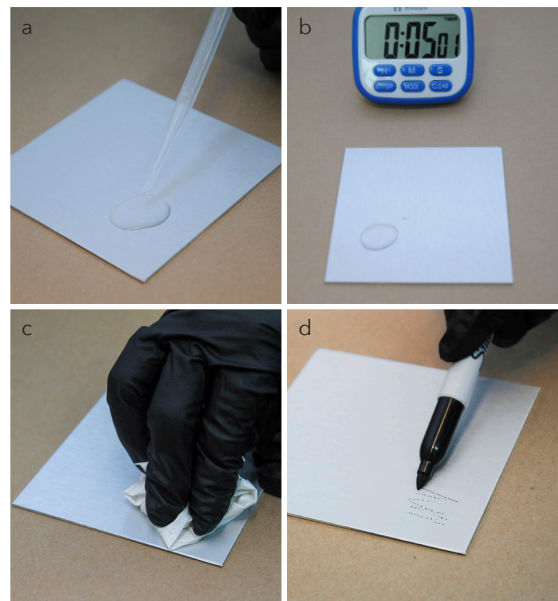
Place the fully cured Gentoo coated item on a clean, flat surface with good lighting.

(a) Use a disposable pipette to place a droplet of pure Acetone about 1 cm in diameter, on the surface of the item to be tested.

(b) Set a timer for 5 minutes. After 5 minutes has elapsed, tip the item at a 90° angle to allow the acetone to run off.

(c) Gently wipe the item dry and rub a fine point Sharpie® Marker over the area where the acetone was applied.

(d) On a properly coated and cured sample the Gentoo coating will not be removed by the acetone and the marks can easily be wiped away with a dry cloth or paper towel.



Gentoo Adhesion/Cured Testing Continued

3. Tape Adhesion Test

This is a modified version of ASTM D3359 "Measuring Adhesion by Tape Test".

Place the fully cured Gentoo coated item on a clean, flat surface with good lighting.

(a) Use a cutting tool such as a sharp razor blade, scalpel or knife to make 6 horizontal cuts through the coating to the substrate. Each cut should be approximately $\frac{3}{4}$ inch long and about $\frac{1}{8}$ inch apart. Make 6 vertical cuts of the same length and spacing through the horizontal cuts to form a 5 by 5 grid of squares.

Lightly brush away any loose flakes of coating.

(b) Cut a piece of strong tape such as Black Gorilla Brand tape or high quality duct tape of sufficient size to extend over all of the cuts in every direction. (c) Center the tape over the cut area and use a pencil eraser or flat object to smoothly and firmly press the tape down over the cut area.

(d) Remove the tape by pulling one end smoothly and rapidly (not jerked) back upon itself

(e) Rub a Sharpie Marker over the entire cut area. If the Gentoo coating has been removed, dark patches will appear between the cuts.

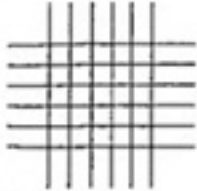
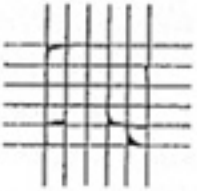
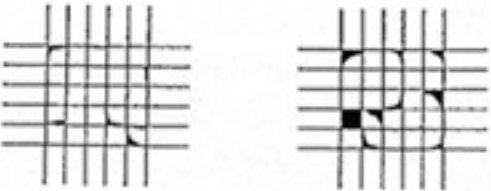

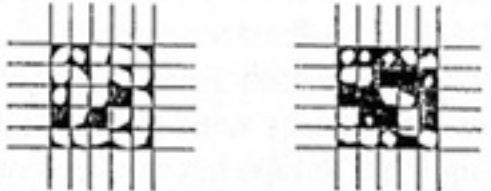
(f) Compare the test pattern on the item being tested to the chart on the next page, and rate the adhesion.

A properly coated and cured item should yield a 5B rating. Some substrates may need a pre-treatment to attain a 5B adhesion. This is detailed in the preparation and coating instructions.



A video of this testing procedure is available at gentoocoating.com

Gentoo Adhesion/Cured Testing Continued

Classification	% of Area Removed	Surface of Cross-cut Area From Which Flaking has Occured for 6 Parallel Cuts & Adhesion range by %
5B	0% None	
4B	Less than 5%	
3B	5 - 15%	
2B	15 - 35%	
1B	35 - 65%	
0B	Greater than 65%	