Paul N. Gardner Company

CROSS HATCH DUAL TOOL **ADHESION**

Instructions for using the Cross Hatch Adhesion Dual tool to perform cross-hatch adhesion tests.

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Cross Hatch Dual Tool

The Cross Hatch Adhesion Dual tool is a metal shim assembly model designed for cross-hatch adhesion testing with spacing options up to 6 mm, including larger spacings used in some bridge and industrial work.

The tool uses a non-slip guide body and shim-guided cutting method to help produce uniform cuts without repositioning the instrument between each pass. Full kit is available at GARDCO.com

Before You Begin

Before testing, prepare the specimen and select the test area as outlined in ASTM D3359.

Inspect the cutter knife tip before use. If the tip is dull from prior use, remove the top plastic cap and snap off one segment of the blade using the cap while only one segment extends from the protective housing.

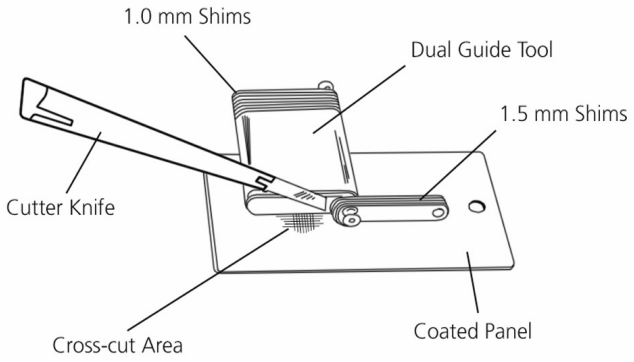
Choosing Cut Spacing

Select the spacing needed for your test and configure the Dual Shim Assembly to match that thickness.

- For the selected spacing, remove the lower shoulder bolt from the metal shims of that thickness
- Standard operation produces eleven uniform cuts when all ten shims are used one at a time
- For 3 mm spacing, rotate two shims upward after each cut; this produces six equally spaced cuts
- Cuts spaced at 2 mm are produced by using the 1 mm shims, rotated two at a time for each cut
- Available spacing options include 1, 1.5, 2, 3, 4, 4.5, 5, and 6 mm

Instructions for Use

1. Select the thickness of cuts to be used and remove the lower shoulder bolt from the metal shims of the Dual Shim Assembly that match this thickness
2. Place the non-slip instrument on the test surface with all shims in the lowered position.
3. Make the first cut by drawing the blade downward with light pressure against the shim, similar to drawing a straight line with a straight edge.
4. Without moving the position of the instrument on the test surface, rotate the first shim upward and out of the way so the second cut can be made using the second shim as a guide.
5. Repeat this process until all required shims have been rotated upward. When all ten shims are used one at a time, the tool produces eleven uniform cuts.
6. Rotate the instrument 90° on the test surface and repeat the same procedure to produce intersecting cuts across the first set.
7. After the cross-hatch pattern is produced, continue with the remaining ASTM D3359 evaluation procedure.



Special Spacing Notes

The procedure for making 3 mm spaced cuts is the same as the standard procedure, except that two shims are rotated upward following each cut.

This produces six equally spaced cuts.

For 2 mm spacing, use the 1 mm shims and rotate them two at a time for each cut.

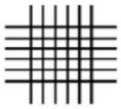
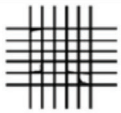
You can produce patterns using 1, 1.5, 2, 3, 4, 4.5, 5, and 6 mm spacings while still creating three cuts in each direction in the cross-cut pattern.

Tips for Operation

- Keep the instrument in position while rotating the shims upward between cuts
- Use light, controlled pressure when drawing the blade against the shim guide
- Check the blade tip before testing to make sure a sharp cutting segment is exposed

Classification of Adhesion Test

Use the ASTM D3359 adhesion rating chart on this page to match your test pattern to the appropriate rating and easily determine the percentage of coating removed and overall adhesion level.

Classification	% Of Area Removed	Surface Of Cross-cut Area From Which Flaking Has Occurred 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%