

Adhesion

Cross Cut Test

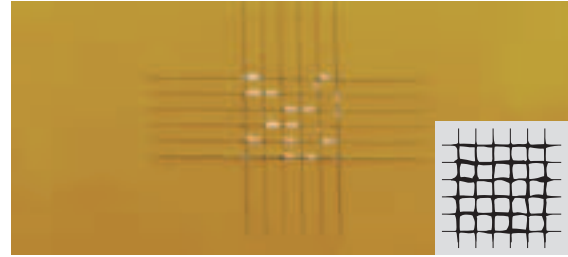
The cross-cut test is a simple and easily practicable method for evaluating the adhesion of single- or multi-coat systems.

Procedure

- Make a lattice pattern in the film with the appropriate tool, cutting to the substrate
- Brush in diagonal direction 5 times each, using a brush pen or tape over the cut and remove with Permacel tape
- Examine the grid area using an illuminated magnifier

Cross-Cut Results

Adhesion is rated in accordance with the scale below.



- ISO Class.: 2 / ASTM Class.: 3 B
The coating has flaked along the edges and/or at the intersections of the cuts. A cross-cut area significantly greater than 5 %, but not significantly greater than 15 %, is affected.



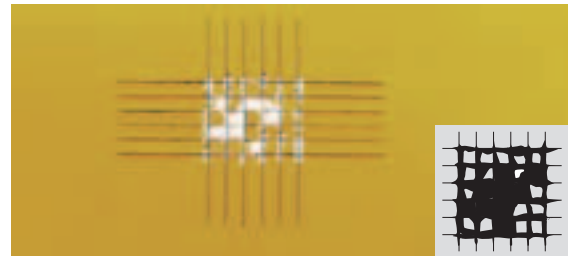
- ISO Class.: 0 / ASTM Class.: 5 B
The edges of the cuts are completely smooth; none of the squares of the lattice is detached.



- ISO Class.: 3 / ASTM Class.: 2 B
The coating has flaked along the edges of the cuts partly or wholly in large ribbons, and/or it has flaked partly or wholly on different parts of the squares. A cross-cut area significantly greater than 15 %, but not significantly greater than 35 %, is affected.



- ISO Class.: 1 / ASTM Class.: 4 B
Detachment of small flakes of the coating at the intersections of the cuts. A cross-cut area not significantly greater than 5 % is affected.



- ISO Class.: 4 / ASTM Class.: 1 B
The coating has flaked along the edges of the cuts in large ribbons and/or some squares have detached partly or wholly. A cross-cut area significantly greater than 35 %, but not significantly greater than 65 %, is affected.

- ISO Class.: 5 / ASTM Class.: 0 B
Any degree of flaking that cannot even be classified by classification 4.

Standards

ASTM	D 3002	D 3359
DIN EN ISO		2409

Parallel Groove Adhesion Test

Adhesion

Cross Hatch Cutter Kit

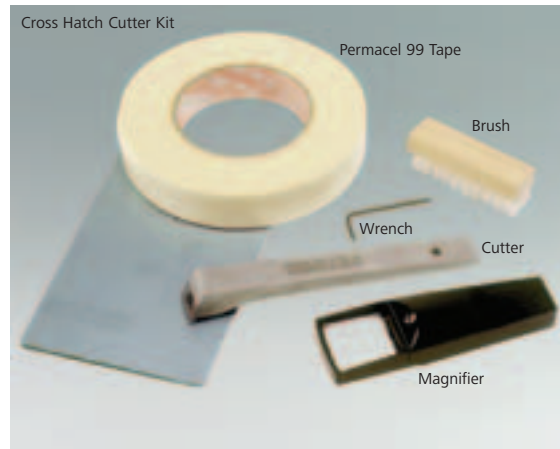
The Cross Hatch Cutter Kit provides a practical, low cost and widely used method to evaluate adhesion.

- Measurement of adhesion by tape test
- Simple and easy to use

Each kit comes with a choice of one of three blades: fine blade, medium blade or coarse blade.

Procedure

Uses the procedure on the previous page 106, and can also be used for pull off adhesion by using the included tape.



Standards

ASTM D 3359

Ordering Information

Cat. No.	Description	Price
TAR-8601	Cross Hatch Cutter Kit	\$ 208.00
TAR-8602	Cross Hatch Cutter Kit	\$ 208.00
TAR-8603	Cross Hatch Cutter Kit	\$ 208.00

Comes complete with:

Blade with holder / handle
 Hex wrench for changing blades
 Extra clamp screw
 Small cleaning brush
 Lighted magnifier
 One roll of Permacel 99 Adhesive Tape
 Plastic case

Technical Specifications

Blade	Spacing	No. Of Cutting Teeth
fine	0.04 in (1.0 mm)	11
medium	0.06 in (1.5 mm)	11
coarse	0.08 in (2.0 mm)	6

Ordering Information

Cat. No.	Description	Price
TAR-8640	Replacement Blade	\$ 85.00
TAR-8641	Replacement Blade	\$ 85.00
TAR-8642	Replacement Blade	\$ 85.00
TAR-8660	Replacement Tape	\$ 31.00

Accessories

Blade	Spacing	No. Of Teeth
fine	0.04 in (1.0 mm)	11
medium	0.06 in (1.5 mm)	11
coarse	0.08 in (2.0 mm)	6
Permacel 99, 1 in x 72 yds		

Adhesion

Parallel Groove Adhesion Test

Cross-Cut Tester

The BYK-Gardner Cross-Cut Tester consists of multi-cut tools with 1 cutting edge in its simple version or 6 cutting edges in its round version for longer lifetime.

Standards prescribe the following spaces between two cuts:

film thickness			
up to	2 mils (60 µm)	1 mm cutter spacing	
film thickness			
up to	5 mils (120 µm)	2 mm cutter spacing	
film thickness			
more than	5 mils (120 µm)	3 mm cutter spacing	



Standards

ASTM	D 3002	D 3359
DIN EN ISO	2409	

Ordering Information

Cat. No.	Description	Price
TAB-5121	Cross-Cut Tester 1.5 mm	\$ 473.00
TAB-5123	Cross-Cut Tester 1 mm	\$ 284.00
TAB-5127	Cross-Cut Tester 1.5 mm	\$ 284.00
TAB-5120	Cross-Cut Tester 1 mm	\$ 473.00
TAB-5122	Cross-Cut Tester 2 mm	\$ 473.00
TAB-5125	Cross-Cut Tester 1 mm	\$ 284.00
TAB-5126	Cross-Cut Tester 2 mm	\$ 284.00
TAB-5128	Cross-Cut Tester 3 mm	\$ 360.00

Comes complete with:

- Cross-Cut Tester with blade
- Hex wrench for changing blades
- Magnifier
- Cleaning brush
- Plastic carrying case
- Operating instructions

Technical Specifications

Standard	No. Of Teeth	No. Of Cutting Edges	Cutter Spacing	Hex Wrench included
ASTM	11	6	0.06 in (1.5 mm)	—
ASTM	11	1	0.04 in (1 mm)	yes
ASTM	11	1	0.06 in (1.5 mm)	yes
DIN / ISO	6	6	0.04 in (1 mm)	—
DIN / ISO	6	6	0.08 in (2 mm)	—
DIN / ISO	6	1	0.04 in (1 mm)	yes
DIN / ISO	6	1	0.08 in (2 mm)	yes
DIN / ISO	6	1	0.12 in (3 mm)	yes

Cross-Cut tester made of high alloy steel