



CC3000 Adhesion Test Kit acc. ISO2409, ASTM D3359

SP1680, SP1681, SP1682, SP1683, SP1684

User Manual

General:

TQC CC3000 is a testkit for testing the adhesion of coatings to a preceding coat or substrate. The testkit contains a blue/grey handle, a hardened steel cutter (type may vary), a nylon brush, an illuminated magnifier, adhesive tape and one 2 mm. Allen key.

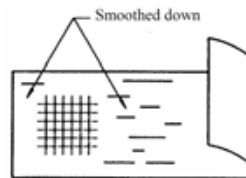
Measuring Method:

A right-angle lattice pattern is cut into the coating penetrating through to the substrate. The resistance of the coating to separation of the substrate is classified using the table.

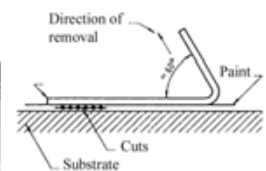
Use:







- Make sure the surface to be tested is rigid and firm
- Make two cuts/scratch, perpendicular to each other, drawing the blue handle with the appropriate cutter (depending on coating thickness and substrate) through the coating into the substrate thus making the lattice pattern.
- Brush the pattern lightly with the supplied brush several times back and forth along each of the diagonal lines of the lattice pattern.
- For hard substrates only the test can be extended by applying the adhesive tape parallel to one set of cuts over the lattice pattern and pull it off steadily in 0.5 to 1 sec. at a 60° angle within 5 minutes after applying.
- Carefully examine the cut area, if required using the magnifier and classify the test area according the table

a) Position of tape with respect to grid



b) Position of tape immediately prior to removal from grid



Classification	Description	Appearance of surface of cross-cut area from which flaking has occurred (Example for six parallel cuts)
0	The edges of the cuts are completely smooth; none of the squares of the lattice is detached.	
1	Detachment of small flakes of the coating at the intersections of the cuts. A cross-cut area not significantly greater than 5 % is affected.	
2	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.	
3	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.	
4	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.	
5	Any degree of flaking that cannot even be classified by classification 4.	

Hint: Always makes sure the cutter is sharp and undamaged. The ISO-standard advises to replace the cutter when the top of the cutting teeth has flattened with 0,1 mm. Change the cutter by loosening the small bolt at the top using the Allen key. (see picture)



- Range:** ISO 2409 :2003: 1 mm. spacing for coatings up to 60 µm on hard substrates
 2 mm. spacing for coatings up to 60 µm on soft substrates
 2 mm. spacing for coatings from 61 to 120 µm on both hard and soft substrates
 3 mm. spacing for coatings from 121 µm to 250 µm on both hard / soft substrates
- ASTM D3359: 1 mm. spacing for coatings up to 50 µm
 1,5 mm. spacing for coatings from 50 to 125 µm

Maintenance:

Treat your instrument as a delicate instrument with care, also for your own safety because the cutter is sharp.

- Clean with a soft and dry cloth. Do not use water or solvents.
- Avoid mechanical shocks or contact with sharp objects
- Always use high quality alkaline batteries. (Illuminated magnifier)