PHYNIX
Physikalische Oberflächen-Messtechnik
Physical Surface Testing Technology

The cross-cut-test serves the determination of the adhesion of single and multi-coat systems with the underground.

Quick user guide:

Attach six parallel cuts to the underground. These are crossed afterwards by 6 perpendicular cuts.
Hold the cross-cut-tester by its handle with one hand. Do not use your other hand to add preasure to the cutting head.
The blade distance depends on layer thickness of the coating and the kind of the underground as follows:

Examination to DIN EN ISO 2409

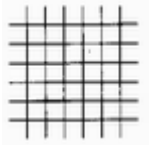
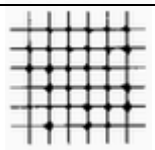
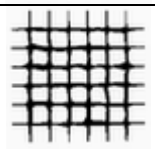
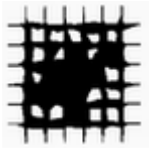
Up to 60µm film thickness 1mm blade distance
60 – 120µm film thickness 2mm blade distance
120 – 250µm film thickness 3mm blade distance

Examination to ASTM D 3359 – 02

Up to 50µm film thickness 1mm blade distance
50 – 125µm film thickness 2mm blade distance

After making the required cuts brush the film slightly with a soft brush.
The evaluation of the examination takes place visually with the naked eye via comparison with table 1.
According to the numbers of chipped-off squares and the appearance a characteristic value, the “cross-cut characteristic value” is assigned.

Table 1

Description	Surface	Grading ISO	Grading ASTM
The edges of the cuts are completely smooth, none of the squares of the lattice is detached		GT 0	5B
At the intersections of the grid lines small fragments of the painting chipped off; chipped off surface about 5% of the sections.		GT 1	4B
The painting chipped off along the edges of cut and/or at the intersections of the grid lines; chipped off surface about 15% of the sections		GT 2	3B
The painting chipped off along the edges of cut partly or in broad strips and/or the painting from individual sections totally or partly chipped off completely; chipped off surface about 35% of the sections.		GT 3	2B
The painting chipped off along the edges of cut in broad strips and/or of individual sections totally or partly; chipped off surface about 65% of the sections.		GT 4	1B
Each degree of flaking that cannot even be classified by classification 4.		GT 5	0B

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