

DSS-Co.01.04 | Coating Anomalies

Chemical Attack Spots (cleaner/acid/alkali on sputtered stacks)

Coating anomaly on the worked surface or on a cavity face; acceptance constrained by VIS §6 “Coatings”

Diagnosis summary

Localized appearance changes (spots, rings, blooms) on a sputtered low-E / multilayer functional coating caused by chemical interaction (e.g., acidic brick wash, alkaline cleaners, aggressive solvents). On exposed coated faces (#1 or #4, as applicable), these present as sheen/colour/density shifts or matte “burns” without chip-flank fracture morphology.

Field identification cues

- Surface-catch class (MSRT):
- Expect SC-0 (none) for purely optical coating changes; SC-1 (slight) is possible if subtle micro-texture is present within the spot.
- Reveal / lighting / geometry:
- Complete Non-Invasive Reveal (clean & dry; no blades/chemicals) before evaluation. Inspect at 12 / 36 / 72 in, normal incidence + oblique sweep (~60°-120°) with raking light, per VIS.

Classification, severity and scope

- If on exposed coated face (#1/#4):
- CAT-1 - non-tactile spot/halo with SC-0; no edge morphology at acceptance geometry.
- CAT-2 - faint micro-texture within the spot yielding SC-1 (slight).
- CAT-3 - pronounced modeled micro-texture/patch detectable at standard distance, still without chip flanks. (Assign CAT by visibility convention + MSRT outcome; cause is informative only.)
- If on cavity face (#2/#3) or otherwise inaccessible: CAT-5 - out of in-place scope by location; document and refer per project protocol (fabricator/manufacturer/warranty).

Distinguishing criteria

- vs. Face films/residues (R-family): Residues change with Non-Invasive Reveal; a true coating attack persists after reveal.
- vs. Mechanical scratches (M.01): Scratches show chip flanks/micro-chipping and SC-2 along a line; chemical spots are area-based, boundaryless or haloed, and generally SC-0/SC-1.
- vs. IGU internal haze/volatiles (A.01.01): Internal cues show fixed parallax and map to CAT-5 by location.

Documentation and inspection

- Photo set (VIS): 12 / 36 / 72 in, normal + oblique, include raking; add macro frames showing spot/halo without chip flanks or a worked transition edge.
- MSRT result: Record SC class (expect SC-0; SC-1 if micro-texture). One pass, non-marring; on coated faces prefer polymer stylus or visual-only.
- Forms: Pane ID; surface numbering; worked surface Y/N; functional coating present on worked surface? (Y/N/Unknown); geometry checklist; photos attached.

Safety / repairability boundary: Complete only the non-invasive reveal and inspection steps authorized by the controlling VIS guidance. Classification does not authorize restoration, establish acceptance, or override stop-work, coating, crack, integrity, access, chemical, fall-protection, or project-specific requirements.

Full DSS publication: use the catalog download. Web specification:

<https://a7df714357.nxcli.io/learning-center/resource-center/damage-specification-standards/dss-co-01-04-chemical-attack-spots-cleaner-acid-alkali-on-sputtered-stacks/>