

DSS-Co.01.02 | Coating Anomalies

Color Non-Uniformity / Patchiness (sputtered low-E & multilayer films)

Coating anomaly on the worked surface - face-side condition; acceptance constrained by VIS §6 "Coatings"

Diagnosis summary

A localized change in color cast, tone, or optical density within a sputtered low-E or other multilayer functional coating on an exposed face (#1 or #4, as applicable). Presents as patchy zones, clouds, or bands without chip-flank fracture morphology. Under VIS, such coating anomalies are "coating anomalies (visual)" and are treated as appearance cues on the worked surface-not between-pane/system features.

Field identification cues

- Surface-catch class (MSRT):
- Expect SC-0 (none) if the cue is a pure coating-appearance change. Perform one light, non-marring pass only; prefer a polymer stylus on suspected coated faces-or rely on visual/location cues to avoid disturbing the coating.
- 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

- Typical CAT band (appearance-based):
- CAT-1 - non-tactile color patchiness; SC-0; no edge morphology at acceptance geometry.
- CAT-2 - subtle micro-texture within the patch yielding SC-1 (slight).
- CAT-3 - pronounced, patchy modeled micro-texture detectable at standard distance, still without chip flanks. (Assign CAT by observable cues using VIS visibility convention + MSRT outcome.)
- Acceptance split (critical): Even if classified CAT-1...CAT-3, coating anomalies on the worked surface are not permitted at acceptance under VIS coatings guidance (see project-spec phrasing referencing).

Distinguishing criteria

- vs. Mechanical scratches (M.01): Scratches show chip flanks/micro-chipping and SC-2 along a line; coating color patchiness lacks flanks and is area-based.
- vs. Face films/residues (R-family): Residues change with Non-Invasive Reveal; a true coating patch persists after reveal.
- vs. IGU/internal haze (A.01.01) or cavity fines (A.01.03): Internal cues exhibit fixed parallax and are CAT-5 by location; coating anomalies are on the worked face.

Documentation and inspection

- Photo set (VIS): 12 / 36 / 72 in, normal + oblique, include raking; add a macro frame showing boundaryless patchiness (no chip flanks/transition edge).
- MSRT result: Record SC class (expect SC-0); 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-01-02-color-non-uniformity-patchiness-sputtered-low-e-multilayer-films/>