

## DSS-R.04.01 | Residue / Film / Adhesion

# Detergent / Surfactant Film

Residue/film - cleaning solution residue; streaks, shear marks, rainbowing/iridescence in raking; typically SC-0, SC-1 if micro-texture from abrasive wiping

### Diagnosis summary

Detergent/surfactant film is an appearance change on glass from leftover cleaning agents (surfactants, wetting agents, soaps) due to incomplete rinse, over-concentration, hard-water mixing, or re-deposition from tools. It presents as shear streaks, drag/wipe overlaps, rainbow/iridescent sheens in low-angle light, and re-wet spotting. Classification is appearance-only per VIS (method-agnostic).

### Field identification cues

- Surface-catch class (MSRT)
- Typically SC-0 (thin organic film on surface).
- SC-1 may occur where abrasive cloths/pads introduced very shallow micro-texture while detergent residue acted as a binder; SC-2 is uncommon and suggests misclassification.
- Perform one light, non-marring pass on a small revealed test patch (substrate). Use polymer stylus if a functional coating is suspected. MSRT supports classification only.

### Classification, severity and scope

- Assign CAT by visibility at acceptance geometry and MSRT after a controlled reveal test. Depth values are indicative-field measurement not required.
- CAT-1 (Benign / non-relief): Thin detergent veil with shear streaks/iridescence; SC-0; mainly angle/raking visible. Indicative relief: 0-10 µm (optical film).
- CAT-2 (Light): Persistent film with overlap edges and SC-1 in small zones (from abrasive wiping); limited impact at standard view. Indicative relief: ~10-40 µm.
- CAT-3 (Moderate): Wide-area streaking/veils legible at standard distance due to heavy deposition or soil capture; localized SC-1. Indicative relief: ~40-120 µm.
- Reclassify when: After true residue removal, any modeled micro-texture or SC>0 persists → evaluate under M.02 (abrasion fields) or Ch.03 (mineral) if water deposits are involved.

### Distinguishing criteria

- vs.
- vs. Mineral staining (Ch.03.02): Minerals leave ring/runs and crystalline edges; detergent films present tool-path streaks and uniform iridescence without ring crystals.
- vs. Hydrophobic mismatch (Ch.06.02): Mismatch exhibits sharp wetting boundaries; detergent film shows gradual streaks that re-wet uniformly (but highlight streak lines).

### Documentation and inspection

- Photo set (VIS): 12 / 36 / 72 in, normal + oblique; raking macros of shear streaks and iridescence; optional light mist frame to show re-wet behavior (avoid flooding edges).
- MSRT result (substrate): After a small reveal test patch, perform one light, non-marring pass; record SC-class (SC-0/SC-1/SC-2).
- Forms: Pane ID; product family & surface numbering; worked surface Y/N; functional coating present on worked surface?

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-r-04-01-detergent-surfactant-film/>