

DSS-R.04.02 | Residue / Film / Adhesion

Fabric Softener / Cleaner Additive Film

Residue/film - cationic/siloxane additives from laundry/cleaners or treated towels; strong wetting anomalies, smeary glow, fragrance cue; typically SC-0, SC-1 if light micro-texture from improper wiping

Diagnosis summary

Fabric softener / cleaner additive film is an appearance change on glass caused by transfer of conditioning agents (e.g., cationic quaternary compounds, siloxanes, fragrances, optical brighteners) from laundered towels or multi-purpose cleaners containing "leave-behind" additives. It presents as smeary glow/halo, strong wetting anomalies (persistent beading/sheeting contrast), and directional wipe geometry.

Field identification cues

- Surface-catch class (MSRT)
- Typically SC-0 (thin organic film on top).
- SC-1 may appear where aggressive/abrasive wiping created very shallow micro-texture while film was present; SC-2 uncommon-recheck classification if observed.
- Perform one light, non-marring pass on a small revealed test patch (substrate). Use a 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 on a small area. Depth values are indicative-field measurement not required.
- CAT-1 (Benign / non-relief): Thin hydrophobe film; SC-0; visible mainly at angle/raking; clear wetting contrast on mist. Indicative relief: 0-10 µm (optical).
- CAT-2 (Light): Persistent wetting contrast with wipe overlaps; localized SC-1 from prior abrasive wiping; limited standard-view impact. Indicative relief: ~10-40 µm.
- CAT-3 (Moderate): Wide-area hydrophobe contamination legible at standard distance (global sheen non-uniformity), with scattered SC-1; typically from repeated deposits over time.
- Reclassify when: After true residue lift, any modeled micro-texture or SC>0 persists → evaluate under M.02 (abrasion fields) or Ch.06.02 (hydrophobic coating mismatch halo) if a durable surface treatment.

Distinguishing criteria

- vs. Detergent/surfactant film (R.04.01): Both show wipe geometry; additive films feature stronger wetting contrast and often a fragrance cue; detergent film shows iridescence more commonly.
- vs.
- vs. Silicone/PIB smears (R.01.xx): Sealant smears are oily/tacky near joints and may show stringers; additive films are thin, broad and coincide with cleaning paths.

Documentation and inspection

- Photo set (VIS): 12 / 36 / 72 in, normal + oblique; raking macros of sheen gradients and overlap lines; optional light mist frame to show beading/sheeting contrast (avoid).
- 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-04-02-fabric-softener-cleaner-additive-film/>