

DSS-R.04.05 | Residue / Film / Adhesion

Nicotine / Tar Film

Residue/film - tobacco/vape condensates and combustion by-products; brown/amber veil, drip legs on verticals, strong odor; typically SC-0, localized SC-1 where abrasive/dusty wiping introduced shallow micro-texture

Diagnosis summary

Nicotine / tar film is an appearance change on glass from tobacco smoke or vape condensates (nicotine, tars, glycols, aromatics) and combustion by-products that deposit as a sticky brown/amber veil. It often shows edge build, finger wipe "windows", and drip legs on vertical glazing where condensation cycles occur. Classification is appearance-only per VIS (method-agnostic).

Field identification cues

- Surface-catch class (MSRT)
- Typically SC-0 (sticky organic film on surface).
- SC-1 may appear where dust-laden/abrasive wiping compacted soil or introduced very shallow micro-texture; SC-2 is 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 test. Depth values are indicative-field measurement not required.
- CAT-1 (Benign / non-relief): Thin amber veil; SC-0; mainly angle/raking visible; minor wipe marks. Indicative relief: 0-10 µm (optical film).
- CAT-2 (Light): Persistent tacky film with wipe overlaps/drip legs and localized SC-1 from prior dusty wiping; limited standard-view impact. Indicative relief: ~10-40 µm.
- CAT-3 (Moderate): Wide-area, high-contrast discoloration legible at standard distance (global amber haze), with scattered SC-1; often long-term exposure or poor housekeeping.
- Reclassify when: After true residue lift, any modeled micro-texture or SC>0 persists → evaluate under M.02 (abrasion fields); if soot predominates without amber tone, consider E.01.03 Soot/particulate.

Distinguishing criteria

- vs. HVAC aerosol/oil film (R.04.03): HVAC films are clear/neutral with grille-aligned gradients; nicotine/tar shows amber tone, odor, and drip legs from condensation cycles.
- vs. Kitchen grease/aerosol film (R.04.04): Kitchen grease has spatter freckles near cooking lines; nicotine/tar is more uniform, room-wide, with entry/vaping area context.
- vs. Detergent/surfactant film (R.04.01): Detergent films show iridescence and tool-path streaks; nicotine/tar shows amber veil and odor cues.

Documentation and inspection

- Photo set (VIS): 12 / 36 / 72 in, normal + oblique; raking macros of sheen, wipe overlaps, drip legs; context frames of smoking/vaping areas or signage/HVAC returns.
- 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-04-05-nicotine-tar-film/>