

DSS-Ch.04.02 | Chemical Attack / Etch / Reaction

Adhesive Remover Staining Pattern

Chemical - solvent/citrus/amine blends lifting PSA binders; directional wipe veils, halos, overlap lines

Diagnosis summary

Adhesive remover staining is an appearance change produced when label/film/PSA residue is treated with adhesive removers (e.g., citrus terpenes, glycol ethers, amines, mixed solvents). Incomplete lift and smear leave directional wipe veils, halos, and overlap lines; substrate may remain non-etched (often), but prolonged dwell/hot application can yield very shallow micro-texture.

Field identification cues

- Surface-catch class (MSRT)
- SC-0 on the clean substrate once true residues are fully lifted (non-etch case).
- SC-1 (slight) may be observed where hot/strong remover and pressure caused very shallow modeled texture; SC-2 is uncommon.
- Perform one light, non-marring pass on a revealed test patch only (substrate), not across gummy islands. Use polymer stylus if a coating is suspected. MSRT supports classification only.

Classification, severity and scope

- Assign CAT by visibility impact and MSRT after a controlled reveal on a small patch to distinguish film vs. micro-texture. Depth values are indicative-field measurement not required.
- CAT-1 (Benign / non-relief): Optical veiling only, SC-0 on clean substrate; visible primarily in raking at certain angles. Indicative relief: 0-10 µm (optical).
- CAT-2 (Light): Subtle modeled micro-texture along wipe paths, SC-1; limited impact at standard view. Indicative relief: 10-40 µm.
- CAT-3 (Moderate): SC-1 to SC-2 veiling/mattng legible at standard distance across a broad wipe network with distinct overlap lines. Indicative relief: 40-120 µm.
- CAT-4 (Severe): Rare for adhesive removers alone; consider mixed chemistry (alkaline/solvent stack) if pronounced matte fields appear across wide areas (then re-evaluate under Ch.04.03 or Ch.02 family).

Distinguishing criteria

- vs.
- vs. Mechanical swirls (M.02.01): Abrasive swirls present arcs/tracks with edge sparkle and SC-1/SC-2 along lanes; adhesive veils are sheety with wipe vectors, not discrete abrasive tracks.
- vs. Mineral staining/etch (Ch.03): Mineral conditions track spray/run geometry and may yield ring/arc halos; adhesive-remover staining centers on label/film locations with wipe vectors.

Documentation and inspection

- Photo set (VIS): 12 / 36 / 72 in, normal + oblique; include raking macros showing wipe vectors, overlap lines, and lens halos; add context frames (labels/film remnants,).
- MSRT result: One light, non-marring pass on a clean test patch; record SC-class (expect SC-0 for film-only; SC-1 if shallow micro-texture exists).
- 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-ch-04-02-adhesive-remover-staining-pattern/>