

DSS-R.05.02 | Residue / Film / Adhesion

PVC Plasticizer Smear / Migration Film

Residue/film - contact transfer from PVC/vinyl gaskets, wraps, edge trims, blinds; amber/brown oily smear, strong wetting anomalies, nodey contact patches; typically SC-0, localized SC-1 where abraded with dusty cloths

Diagnosis summary

PVC plasticizer smear / migration film is an appearance change on glass caused by phthalate/alt-plasticizer migration and oily exudate transfer from PVC/vinyl components (edge trims, protection wraps, temporary films, blinds/slats, gasket liners, packing). It presents as an amber/brown oily smear or veil, often with distinct contact patches (nodes/lines) and pronounced wetting anomalies.

Field identification cues

- Surface-catch class (MSRT)
- Typically SC-0 (thin oily film on top).
- SC-1 may appear where dusty/abrasive wiping compacted soil or created very shallow micro-texture; 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 small reveal test. Depth values are indicative-field measurement not required.
- CAT-1 (Benign / non-relief): Thin oily veil with wetting anomalies; SC-0; mainly angle/raking visible. Indicative relief: 0-10 µm (optical film).
- CAT-2 (Light): Persistent migration film with nodey contact patches and localized SC-1 from prior wiping; limited standard-view impact. Indicative relief: ~10-40 µm.
- CAT-3 (Moderate): Wide-area oily contamination legible at standard distance (global sheen non-uniformity, strong wetting contrast) with scattered SC-1. Indicative relief: ~40-120 µm (film stack).
- Reclassify when: After true residue lift, any modeled micro-texture or SC>0 persists → evaluate under M.02 (abrasion fields); if boundaries remain extremely sharp and durable, assess Ch.06.02 Hydrophobic.

Distinguishing criteria

- vs. EPDM gasket black rub (R.05.01): EPDM is grey/black matte along gasket lines; PVC smear is amber/oily with strong wetting contrast and may map blind/trim geometries.
- vs.
- vs. Silicone/PIB smears (R.01.xx): Sealant smears appear oily/tacky near joints with corduroy/stringers; PVC films are broader, often contact-patterned away from joints.

Documentation and inspection

- Photo set (VIS): 12 / 36 / 72 in, normal + oblique; raking macros of sheen, contact nodes/lines, wetting contrast; context frames of PVC components in contact/proximity.
- 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-05-02-pvc-plasticizer-smear-migration-film/>