

DSS-Ch.01.03 | Chemical Attack / Etch / Reaction

Organic-Acid Residues (avian/biogenic high acidity)

Chemical - localized biogenic acid attack; subsurface micro-texture "frost" with runs/pools

Diagnosis summary

Organic-acid residues (e.g., avian droppings, certain plant/biogenic exudates) can produce localized chemical attack on glass, especially under heat + dwell (sun-exposed façades). Resulting appearance ranges from tone/shine shift to subsurface micro-texture ("frost") with run/pool edges. Classification is appearance-only per VIS (method-agnostic). Inspect after Non-Invasive Reveal under VIS lighting/geometry;

Field identification cues

- Surface-catch class (MSRT)
- SC-0 if only a faint optical/cleaning shadow remains (no relief).
- SC-1 (slight) to SC-2 (clear) within etched footprints after reveal when micro-texture developed.
- Perform one light, non-marring pass; polymer stylus if a coating is suspected. Do not abrade. MSRT supports classification only.

Classification, severity and scope

- Assign CAT by appearance + MSRT + morphology (three-part cueing). Depth/relief ranges are indicative-field measurement not required.
- CAT-1 (Benign / non-relief): Sheen/tone shift only, SC-0 after reveal; visible mainly in raking at close/standard view. Indicative relief: 0-10 µm (optical).
- CAT-2 (Light): Subtle etched footprint, SC-1; limited impact at standard view; footprint edges soft. Indicative relief: 10-40 µm.
- CAT-3 (Moderate): Clear detect (SC-2) with modeled micro-texture legible at standard distance; defined pool/run edges. Indicative relief: 40-120 µm.
- CAT-4 (Severe): Pronounced frosted patch over a larger footprint or repeated incidents; distinct at standard & wide-field views. Indicative relief: 120-300 µm+.

Distinguishing criteria

- vs.
- vs. Acid-etch graffiti (Ch.01.01): Graffiti presents intentional stroke geometry/drip legs; organic residues lack letterforms and show pool-centered footprints.
- vs. Residue films (R-family): Detergent/soot films remove at reveal and read SC-0; persisting SC-1/SC-2 indicates etch.

Documentation and inspection

- Photo set (VIS): 12 / 36 / 72 in, normal + oblique; include raking macros resolving footprint interior + edge; add context frames (perch/ledge/tree canopies).
- MSRT result: One light, non-marring pass on a representative area; record SC class (SC-0/1/2). Prefer polymer stylus if a coating is suspected.
- 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-01-03-organic-acid-residues-avian-biogenic-high-acidity/>