

DSS-Th.02.01 | Thermal / Hot Particle / Fusion & Thermal Stress

Torch Proximity Streaking (Heat Skid / Thermal Streaks)

Thermal - localized heat exposure; elongated tone/shine change ± shallow micro-texture

Diagnosis summary

Torch proximity streaking is a localized, elongated appearance change on the exposed face caused by nearby torch/heat tool use (e.g., soldering, brazing, roofing/flashing work). It presents as a streak or band of tone/shine shift and may include modeled micro-texture when the surface has been thermally softened. Classification is appearance-only per VIS (method-agnostic).

Field identification cues

- Surface-catch class (MSRT)
- SC-0 when the effect is purely optical/thermal tint or subtle gloss shift (no relief).
- SC-1 (slight) when very shallow micro-texture is present; SC-2 (clear) is uncommon but possible where softening produced minute relief. Perform one light, non-marring pass; polymer stylus if a coating is suspected.
- Visual signature

Classification, severity and scope

- Assign CAT by appearance + MSRT + morphology (three-part cueing). Depth bands below are indicative-numeric measurement not required.
- CAT-1 (Benign / non-relief): Sheen/tone shift only, SC-0, no modeled texture; visible mainly in raking at close/standard view. Indicative relief: ~0-10 µm (optical only).
- CAT-2 (Light): Subtle modeled micro-texture, SC-1 (slight); limited impact at standard view; no chip flanks. Indicative relief: ~10-40 µm.
- CAT-3 (Moderate): Clear detect (SC-2) with visible modeled micro-texture at standard view; boundaries remain soft (no transition ring). Indicative relief: ~40-120 µm.
- CAT-4 (Severe): Pronounced matte/frosted band due to thermal softening/devitrification; distinct at standard & wide-field views; still no pits/craters. Indicative relief: ~120-300 µm+.

Distinguishing criteria

- vs. Oxy-fuel/plasma/grinder pepper (Th.01.xx): Hot-particle damage shows discrete nodules/pits with bright rims; torch streaking is a continuous band without discrete pepper.
- vs. Linear scoring (M.01): Scoring forms continuous abrasive lines with chip-flank sparkle; torch streaks show modeled (non-directional) micro-texture or sheen shift.
- vs. Residue films (R-family): Soot and condensate remove at reveal (SC-0). Persisting core band suggests thermal effect → classify here.

Documentation and inspection

- Photo set (VIS): 12 / 36 / 72 in, normal + oblique, include raking macros resolving any micro-texture; add context frames showing suspected heat source alignment.
- MSRT result: Record SC-class (SC-0/1/2) with one light, non-marring pass (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-th-02-01-torch-proximity-streaking-heat-skid-thermal-streaks/>