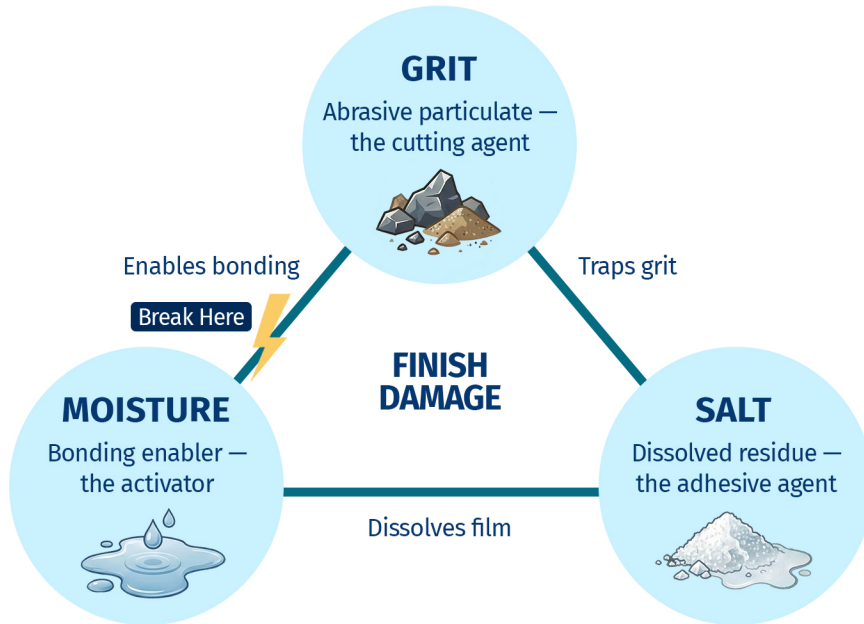


1 THE WINTER SOIL TRIANGLE



BREAK THE TRIANGLE

Moisture is the enabler. Control moisture recovery speed and the triangle collapses — grit cannot embed without the adhesive film salt creates when dissolved. **Your highest-leverage intervention is dry-down speed.**

2 THE BONDING PATHWAY



STEP 1

Moisture contacts salt on floor.

Instant



STEP 2

Salt dissolves into adhesive film.

Seconds



STEP 3

Film traps abrasive grit particles.

Minutes



STEP 4

Foot traffic grinds grit into finish.

Every Step

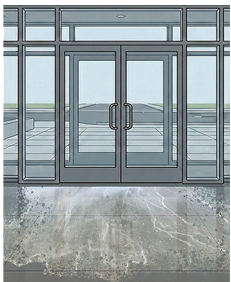


RESULT

Dulling, scratching, finish failure.

Hours-Days

3 DAMAGE RISK ZONES



ENTRY TRANSITIONS (FIRST 20-40 FT)

Damage in Days

Maximum soil load. Constant moisture re-introduction with every entrance event.

CRITICAL



ELEVATOR LOBBIES

Damage in Days to Weeks

Concentrated stop-and-turn traffic grinds soil at pivot points.

HIGH



HIGH-TRAFFIC CORRIDORS

Damage in Weeks

Sustained linear traffic creates visible wear lanes.

MODERATE-HIGH



SCRUBBER TURN POINTS

Damage in Weeks

Squeegee lifts at reversal — slurry remains on surface.

MODERATE-HIGH



4 MECHANICAL VS. CHEMICAL REALITY

CHEMICAL CAN ADDRESS:

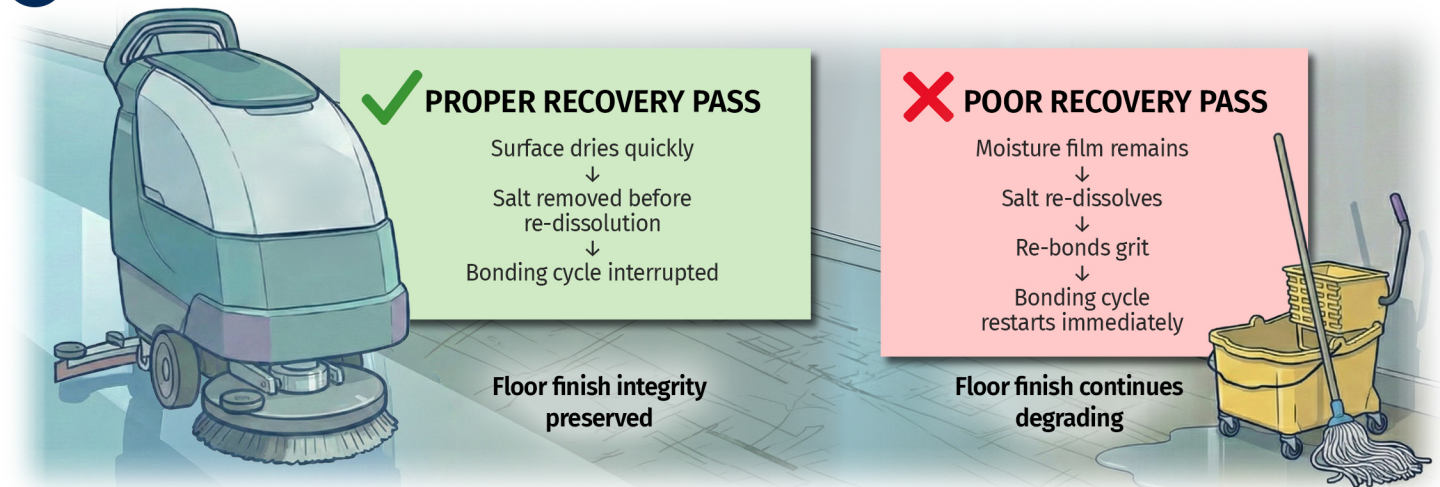
- Surface salt film dissolution
- Light residue suspension
- Loose particulate in solution
- Pre-soak to loosen adhesion

REQUIRES MECHANICAL REMOVAL:

- Embedded abrasive grit
- Bonded slurry (salt + grit + moisture)
- Sub-finish abrasive particles
- Grit in grout lines and texture

You cannot chemically neutralize embedded grit. Increasing chemical strength without improving mechanical recovery is a cost increase with no performance gain.

5 RECOVERY MATTERS



RE-ENTRY TRACKING: WHY SINGLE DAILY CLEANING FAILS

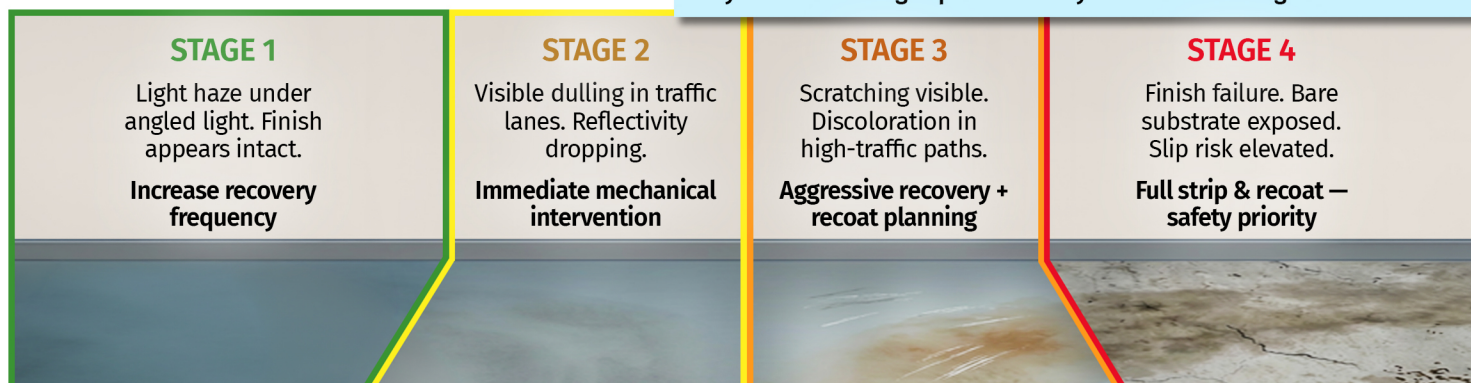
Winter soil is continuously reintroduced. A facility with 500 daily entrance events is re-introducing the bonding cycle 500 times. **Recovery frequency must match re-introduction frequency, concentrated in the highest-risk zones.**

6 WINTER SOIL RESPONSE PROTOCOL

CHALLENGE	CHEMICAL?	MECHANICAL?	RECOMMENDED INTERRUPT	PRIORITY ZONE
Salt film	Partial	Yes	Increase auto-scrub recovery frequency in first 40 ft of entry	Entry transitions
Embedded grit	No	Yes	Verify squeegee contact; add vacuum pre-pass before scrubbing	All high-traffic zones
Moisture film	No	Yes	Improve recovery technique; verify vacuum suction & squeegee seal	Lobbies, corridors
Finish dulling	No	Prevention	Accelerate grit removal upstream; increase entry matting capture	Entry, traffic lanes
Bonded slurry	No	Yes	Pre-soak with neutral cleaner, then aggressive mechanical recovery	Scrubber turn points
Continuous re-intro	No	Yes	Increase recovery frequency to match re-introduction rate; concentrate passes in highest-risk zones	Entry transitions, lobbies, corridors

7 VISUAL DAMAGE PROGRESSION

Walk your highest-risk zones weekly in winter. Compare against these stages — early detection at Stage 1 prevents costly intervention at Stages 3–4.



Scientific References

OSHA 29 CFR §1910.22 — Walking-Working Surfaces General Requirements (2016) | CDC/NIOSH — Hierarchy of Controls (2015) | EPA — Indoor Particulate Matter | EPA — Particulate Matter (PM) Basics | EPA — Sources of Indoor Particulate Matter | ISSA — Official Cleaning Times & Tasks (ISSA 540 Standards, 2021) | ISSA — Simple Steps Toward More Sustainable Floor Care (2024) | Carpet and Rug Institute — Entrance Matting Guidelines | ISSA — Matting Effectiveness Studies (as cited in CMM Online, Durette, 2019) | American Institute of Architects — Matting and Soil Capture Data | Carlson Building Maintenance — Importance of Snow Salt Removal from Commercial Floors (2021) | Jack Laurie Group — How to Prevent Winter Salt from Damaging Your Flooring | Hillyard — Lower Cleaning Cost with Indoor and Outdoor Entry Matting (2023)