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Dry Ice Blasting for Molds & Production Tooling

How to decide whether dry ice cleaning fits a mold, test it, and define a result the plant can approve.

- Screen the mold and its deposits
- Run a controlled test on a representative area
- Write an acceptance standard before cleaning

FOR PLANT MANAGERS, MAINTENANCE LEADERS AND PROCUREMENT TEAMS

Mobile service in New Jersey, New York, Pennsylvania and Delaware. Precision Dry Ice Cleaning operates under Tri-State Laser Cleaning LLC.



Start with the tool, not the method

Dry ice blasting can remove some release agents, resin deposits and oils from molds and tooling. Equipment makers show applications on cavities, vents and molds still mounted in presses [1]. The specific mold may respond differently. Its finish, coating, deposit and access determine whether to test the method.

DECISION IN ONE SENTENCE

Can a trial remove the target deposit while leaving the mold's finish, critical edges and nearby components in an acceptable condition?

Where a trial may help

- **Cavities and vents.** Identify the deposit and check the finish, coating, inserts and vent dimensions with the tool owner.
- **Parting lines and shutoffs.** Agree on what residue may remain. Treat sealing edges as sensitive until tested and inspected.
- **Press frames and fixtures.** Mark grease and release-agent buildup. Identify sensors, wiring, labels and lubricated mechanisms nearby.

When to pause or choose another method

Dry ice is usually considered for removing a deposit, not for creating a rough surface profile for a new coating. Heavy rust scale, strongly bonded coatings and unknown hazardous materials need a separate method review. Removed material still has to be collected [2].

- Identify unknown coatings and possible hazardous constituents before setting the waste plan.
- Get the tool owner's approval before testing fragile, cracked, coated or polished features.
- Use the site's equipment-isolation procedure when guarding or stored energy is involved [3].

Run a test that answers the real question

Pick an area that has the actual deposit and finish. Agree on a pass condition before work starts. Photograph the starting condition and record the cleaning settings.

Record	What to write down
Before	Deposit, tool material, finish, coating and existing damage.
Pass condition	The visible or measured result needed to return to service.
After	Residue left, finish change, coating lift, moisture or trapped debris.
Time	Access, isolation, cleaning, cleanup and inspection.
Approval	Photos, inspection method and the person who signs off.

Four steps for the trial

- **1. Define the area.** List included surfaces, exclusions, operating state and the site contact.
- **2. Control the work.** Assess ventilation and CO₂, noise, cold contact and material dislodged by blasting [2, 4, 5].
- **3. Confirm isolation.** Follow the site's energy-control process for covered servicing and maintenance [3].
- **4. Inspect together.** Compare the result with the agreed pass condition. Record any area that needs a different approach.

Pay attention to small features

A broad face can look clean while a sealing land, shutoff or coated insert responds differently. Include a critical boundary in the test only with the tool owner's permission. Protect or exclude sensors, labels and open passages as the site assessment requires.

- Ask for material, texture, coating and repair history.
- Record nozzle, pressure, distance and other settings used for the approved test.
- Use the tool owner's inspection method for critical features.

Turn the result into a clear work order

Name the assets, target deposits, included surfaces, exclusions, work window, area controls, debris owner and person who approves the cleaned surface. Keep the test record with the maintenance history and review it after any repair, recoating or change of material.

EXAMPLE ACCEPTANCE WORDING

“Remove accessible release-agent buildup from the listed mold faces and vents to match the approved test area. Exclude coated inserts and hidden passages. The site inspects the listed locations before restart.”

Check whether the change helps your line

Compare trials using the same start and finish points. Record labor, total equipment unavailability, cleaning frequency and defects linked to fouling. Keep changes in resin, output and tool condition visible.

Measure	Before and after
Total time	From equipment release through cleanup and accepted inspection.
Frequency	Cycles or days between cleans under similar production conditions.
Quality	The same deposit-related defect or inspection finding.
Tool condition	Existing wear, coating defects and finish at the tested points.

Sources and scope

Sources checked September 23, 2026. Equipment-maker examples show possible applications, not results for an untested asset. The checklists and calculations are planning tools; they are not measured savings.

[1] Cold Jet, Dry Ice Cleaning Equipment for Plastic & Rubber Molds

[2] OSHA, Abrasive Blasting Hazards in Shipyard Employment

[3] OSHA, 29 CFR 1910.147: The control of hazardous energy

[4] NIOSH, Pocket Guide to Chemical Hazards: Carbon dioxide

[5] OSHA, 29 CFR 1910.95: Occupational noise exposure

Next step Request a project review. Send equipment photos, the deposit, ZIP code and maintenance window. You can also email support@precisiondryicecleaning.com or call **917-695-9595**.