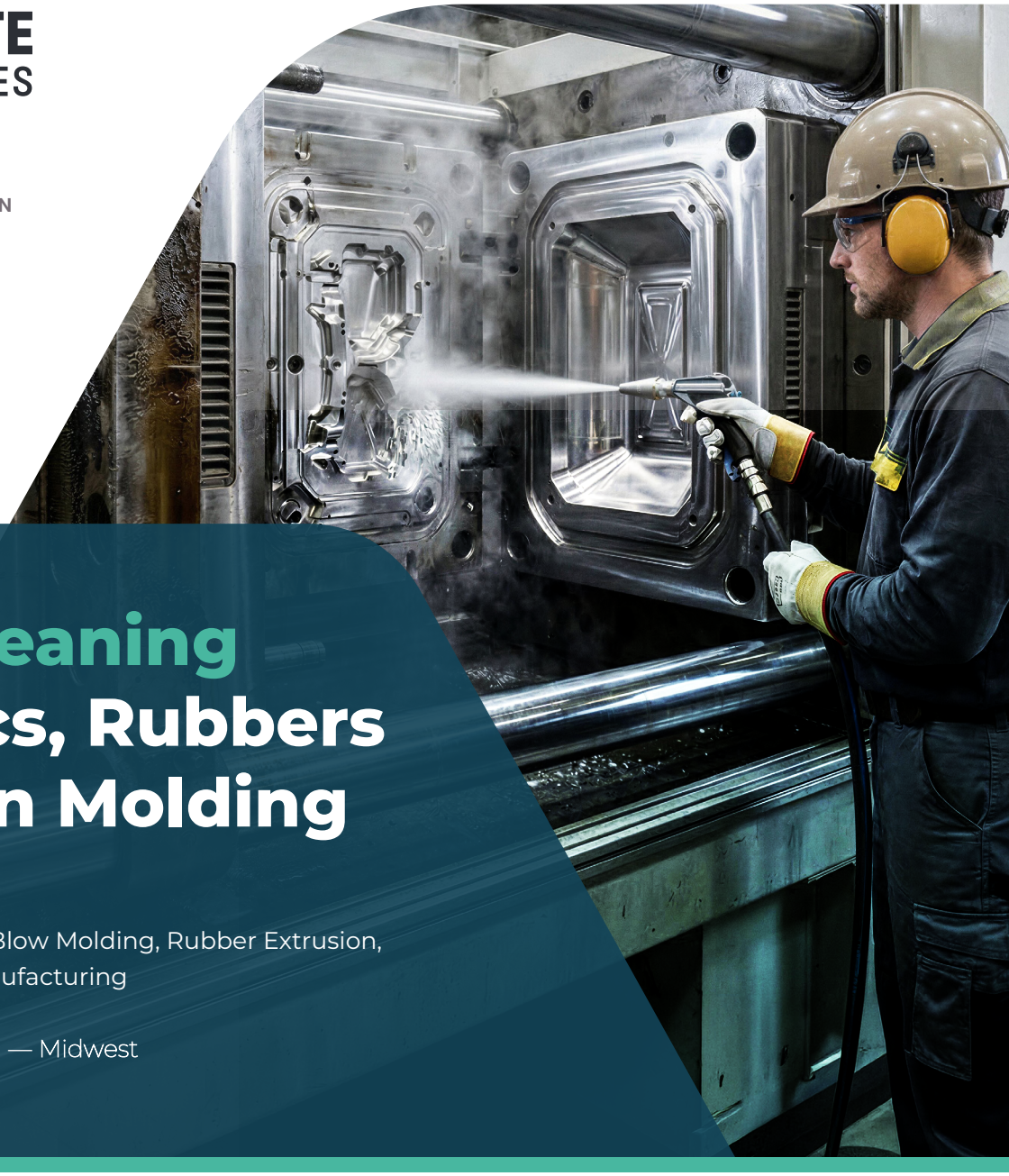
SUBLIMATE TECHNOLOGIES

- DRY ICE CLEANING
- INDUSTRIAL SURFACE PREPARATION
- ON-SITE SERVICE

sublimatetech.com



Dry Ice Cleaning for Plastics, Rubbers & Injection Molding

Industry: Injection Molding, Blow Molding, Rubber Extrusion, Thermoforming, Plastics Manufacturing

Service Area: Central Indiana — Midwest

Company Snapshot

SUBLIMATE Technologies provides mobile dry ice blasting and specialty industrial cleaning for plastics and rubber manufacturers that need molds, presses, and production equipment cleaned without abrasion, water, chemical solvents, or extended downtime. We clean in-place — including in-press mold cleaning — so your tooling stays on the machine and your line gets back to production faster. Our founder brings a background in federal environmental law enforcement and compliance consulting, ensuring every job meets the highest safety and regulatory standards.

Plastics & Molding Challenges

Injection molds, blow molds, rubber dies, and thermoforming tooling accumulate release agents, residue, carbon, flash, and buildup that affect part quality, cycle times, and tool life. Traditional methods — soaking, ultrasonic cleaning, scraping, and blasting — require mold removal, risk surface damage, introduce chemicals, and extend press downtime. Dry ice blasting is a non-abrasive, dry, chemical-free process that cleans molds in-press, removing contaminants while preserving surface finish, tolerances, and micro-geometry.

Pain Points We Address

Press Downtime for Mold Cleaning

Pulling molds for bench cleaning causes lost production, crane use, and reassembly labor. Solvent soaking and ultrasonic cleaning add hours or days to routine maintenance.

Surface Finish Damage

Abrasive methods—bead blasting, wire brushing, scraping—damage mold surfaces, scratch polished cavities, alter textures, and reduce precision of high-tolerance tooling.

Outgassing & Venting Deposits

Mold vents and micro-geometry clog with outgassing residue over production cycles, causing short shots, burn marks, incomplete fills, and surface defects that trigger scrap and rework.

Rubber & Flash Accumulation

Rubber extrusion dies and compression molds accumulate cured rubber buildup, flash, and mold fouling in undercuts and complex geometry that manual methods struggle to reach completely.

Release Agent & Carbon Buildup

Release agents, lubricants, and carbon deposits accumulate on cavity surfaces, parting lines, and ejector components. Manual scraping risks scratching polished mold surfaces.

Chemical Residue on Tooling

Solvent-based cleaning leaves chemical residue on mold surfaces that can contaminate the next production run, cause adhesion issues, or react with certain resin systems.

High-Value Applications

01

In-Press Mold Cleaning

Clean injection, blow, and compression molds in-press, removing residue, release agents, and carbon without pulling the tool.

02

Mold Vents & Micro-Geometry

Restore vents, micro-channels, and complex geometry by removing deposits that cause short shots, burn marks, and defects.

03

Rubber Extrusion Dies & Tooling

Remove rubber buildup, flash, and fouling from dies, mandrels, and forming tools without damaging hardened or plated surfaces.

04

Parting Lines & Ejector Systems

Clean flash on parting lines, ejector pins, and contamination in slides and lifters to restore mold function and cycle consistency.

05

Thermoforming & Blow Mold Tooling

Eliminates carbonized resin, release agent buildup, and surface contamination from thermoforming and blow mold cavities.

06

Hot Runner Systems & Manifolds

Removes resin degradation, color contamination, and carbon deposits from hot runners, manifolds, and gates without disassembly.

07

Electrical Panels & Press Controls

Dry, non-conductive cleaning of press cabinets, PLCs, hydraulic controls, and robot interfaces under LOTO.

08

Conveyor & Material Handling

Clears resin dust, oil, and debris from conveyors, runners, robotic EOAT, and material handling systems.

09

Facility Infrastructure

Removes resin dust and buildup from overhead steel, piping, and ductwork to maintain air quality and housekeeping standards.

10

Scheduled Maintenance & Turnarounds

Deep-cleans production cells during maintenance; in-press cleaning shortens tooling windows and restores production faster.

Proactive Mold & Equipment Cleaning Benefits

In plastics and rubber manufacturing, mold cleanliness is a direct input to part quality, cycle time, and tooling life. Every cycle run on a contaminated mold increases scrap rates, degrades surface finish, and accelerates wear on venting and ejection components. A proactive cleaning program built around dry ice blasting addresses all three simultaneously — and the ability to clean molds in-press eliminates the single largest source of cleaning-related downtime in the industry.

75–90%

Less Press Downtime

In-press mold cleaning with dry ice eliminates pull, transport, bench clean, and reinstall cycles — reducing cleaning-related press downtime by 75–90% versus traditional bench methods.

Up to 30%

Lower Scrap Rates

Regular vent and cavity cleaning reduces short shots, burn marks, flash, and surface defects that drive scrap and rework in high-volume molding operations.

2–3x

Extended Tooling Life

Non-abrasive cleaning preserves mold surface finish, venting geometry, and ejector tolerances — extending the productive life of high-value tooling by reducing cleaning-induced wear.

Workforce Impact: Safer Cleaning, Lower Exposure

Mold cleaning exposes workers to chemical solvents, heated cleaning agents, manual scraping hazards, and repetitive strain injuries. Bench cleaning of heavy molds involves crane operations, confined work positions, and extended solvent contact. OSHA identifies chemical handling, ergonomic strain, and machine interaction as leading injury categories in plastics manufacturing (NAICS 3261).

Dry ice blasting eliminates solvent exposure, reduces manual handling of heavy molds, and allows cleaning in-press — removing the crane, transport, and bench cleaning steps entirely. For manufacturers managing OSHA recordable rates, EMR targets, and customer quality audits, integrating dry ice cleaning directly supports those objectives.

What Mold Cleaning Really Costs

Most molders evaluate cleaning cost by the hour or by the mold. But the true cost of any mold cleaning method includes press downtime, labor, chemicals, tooling wear, scrap generated during the contamination buildup period, and the risk of surface damage from aggressive cleaning. When you account for all cost drivers, dry ice blasting delivers the lowest total cost per cleaned mold.

Hidden Cost Comparison

Cost Category	Manual / Solvent	Pressure Wash / Abrasive	Dry Ice Blasting
Press Downtime	Very high — pull + bench + reinstall	High — pull + soak/ blast + reinstall	**Minimal — clean in-press, no pull**
Direct Labor Hours	High — manual scraping, soaking	Moderate — ultrason-ic/blast + handling	**Low — single-pass, in-press**
Chemical / Material Costs	Ongoing — solvents, soaking agents	Moderate — blast media, ultrasonic fluid	**Dry ice only — subli-mates on contact**
Tooling Wear / Damage Risk	High — scraping, wire brushing	Moderate — abrasive media impact	**None — non-abrasive, surface-safe**
Secondary Waste	Chemical waste manifesting	Blast media disposal	**None — zero secondary waste**
Chemical Residue Risk	High — solvent carry-over to next run	Moderate — media contamination	**None — dry ice leaves zero residue**
Vent & Micro-Geometry Impact	Moderate — manual tools can damage	High — abrasives open micro-features	**Safe — cleans without altering geometry**

The Real Question Isn't What Mold Cleaning Costs — It's What Dirty Molds Cost

When outgassing deposits clog vents and a 64-cavity mold starts producing burn marks on 12 cavities, the cost isn't the cleaning — it's the scrap, the sorting labor, the customer quality complaint, and the emergency mold pull that shuts down a press for a full shift. When a polished cavity gets scratched by a scraping tool during bench cleaning and requires a $5,000 re-polish, the cost isn't the cleaning method — it's the tooling repair, the two weeks of lead time, and the production gap. Dry ice blasting isn't a cleaning expense. It's the method that protects your highest-value assets while keeping your presses running.

Ready to see what in-press mold cleaning looks like for your operation?

Contact us for a no-obligation site assessment and scope of work.

317-894-3004 | oware@sublimatetech.com | sublimatetech.com

Regulatory & Operational Comparison

Benefits	Dry Ice	Trad. Cleaning
No chemical solvents introduced to mold surfaces; eliminates carry-over contamination risk	✓	✗
No secondary blast media to characterize or dispose of	✓	✗
No wastewater generation from cleaning activities	✓	✗
Non-abrasive: preserves polished cavities, textures, venting geometry, and plated surfaces	✓	✗
In-press cleaning capability — no mold pull, transport, or reinstallation required	✓	✗
Safe for hot runner components, electrical systems, and press controls	✓	✗
Supports automotive OEM quality programs, ISO 9001, and IATF 16949 audit readiness	✓	✗
No dry time — press ready to resume production immediately after cleaning	✓	✗

EPA, FDA & USDA Accepted:

Dry ice blasting uses recycled CO and is recognized as an approved cleaning media by EPA, FDA, and USDA. It introduces no chemicals, no water, and no secondary contaminants into your food production environment.

Safety & Credentials

Fully Insured
General liability + workers' comp coverage

LOTO Certified
Lockout/tagout trained operators

CO_2 Monitoring
Real-time atmospheric monitoring on every job

Site-Specific JSAs
Customized Job Safety Analysis for each project

What Sets SUBLIMATE Apart

Single-Source Accountability
One crew, one process, one dedicated point of contact. No subcontracted layers or coordination gaps between you and the work being done on your tooling.

Zero Secondary Waste
No blast media to sweep, no wash water to treat, no spent chemistry to dispose of. The only residue is the removed contaminant itself.

Full Documentation Standard
Every job includes before/after photos, completion notes, and JSA documentation — ready for audits, OEM reviews, and ISO records.

Built for Production Schedules
We mobilize within your scheduled maintenance windows and clean in-press. No crane time, no transport, no bench cleaning extending your press downtime.

Tunable, Surface-Safe Process
We adjust pressure, media flow, and nozzle selection per substrate — polished cavities, textured surfaces, tool steel, plated finishes, and rubber.

Trained, Insured & Site-Ready
Our operators carry their own PPE, follow your LOTO and EHS protocols, and arrive with CO monitoring and containment plans already prepared.

Sublimate Technologies Core Philosophy

Sublimate Technologies was founded on a simple principle: deliver results that exceed expectations, every single time. Our founder's background in federal service and environmental consulting instilled a standard of precision, accountability, and professionalism that runs through everything we do. We've invested heavily in best-in-class technology. But equipment alone doesn't set us apart. What makes Sublimate different is how we work. We take the time to understand each client's operation, and build lasting partnerships rooted in trust and consistent performance.

Common Equipment We Clean:

Injection molds • Blow molds • Compression molds • Rubber extrusion dies • Thermoforming tooling • Hot runner systems • Presses • Conveyors • Electrical panels • Facility infrastructure •

Core Capabilities

- Non-abrasive, dry cleaning (clean-in-place)
- Detail cleaning for sensitive surfaces & precision tooling
- Electrical and controls cleaning under LOTO protocols
- Shutdown/outage support and rapid turnarounds
- Containment, debris capture, and full documentation
- Mold, die & fixture cleaning without disassembly

Company Data

Legal Name: Sublimate Technologies LLC

Address: 3414 Glacier Dr. Monrovia, IN

POC: Oliver Ware — Director of Operations

Phone: 317-894-3004

Email: oware@sublimatetech.com

Website: www.sublimatetech.com

Insurance: General Liability + Workers' Comp

How It Works

1. Contact us with your cleaning challenge — what equipment, what contaminant, what timeline.
2. We provide a scope and quote, typically within 24–48 hours.
3. We mobilize to your facility with our own equipment, dry ice, compressor, and PPE.
4. We clean in-place during your scheduled window — your equipment stays on the floor.
5. You receive before/after documentation and scope completion notes for your records.