

HOW IT WORKS:

3 POWERFUL FORCES

1. Micro-Thermal Energy Transfer:

The cold temperature (-109.3 F or -78.5C) makes the material brittle, shrinks the debris, and loosens it from the subsurface.

2. Kinetic Energy Transfer:

The solid food-grade dry ice pellets strike the cold and brittle contaminant and fractures it.

3. Sublimation Energy Transfer:

When the dry ice comes in contact with the warmer subsurface, the dry ice converts back into carbon dioxide gas in a process called sublimation. During this process dry ice expands 800 times in volume, lifting the contaminants from the surface without abrasion to the substrate.

INDUSTRIES SERVED:

- Automotive
- Petro-Chemical
- Ethanol
- Pharmaceutical/Medical
- Food and Beverage
- Power Generation
- General Manufacturing
- Printing
- Municipalities
- Restoration

ADHERENTS:

- Rust
- Powders
- Corrosion
- Dry Goods
- Adhesives
- Confectionaries
- Sticky/Gummy Film
- Mold
- Syrups
- Bacteria
- Oils
- ...and more

RESOURCES:

Is it ideal for your application?

Go to polarclean.com/cleaning-solutions-guide

Ready to start?

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1231 Prairie Ave. • South Bend, IN 46601
P: 855-537-9423

WHY DRY ICE CLEANING?



COLD HARD FACTS

Why Dry Ice Is Better Than Water,
Chemicals, Hand Tools
and Other Media

CLEANER. FASTER. SAFER.

Dry ice blasting offers a superior clean and leaves nothing behind: no water, no media and no chemicals. It's ideal for food processing equipment, dry goods, electronics, electric motors, intricate tooling and any application where you need a cleaner, faster and safer method of cleaning.

TOP 10 REASONS TO USE DRY ICE BLASTING:

- 1. Superior Level of Clean:** Achieve the level of cleanliness you need whether it's visual or microbial
- 2. No Contamination:** No water, no media and no chemical residue so there's no dry time or extra cleaning required
- 3. Reach Tight Spaces:** Easier to get into hard to reach spaces
- 4. Faster:** Simply takes less time to achieve desired results than other methods
- 5. Allows Equipment to be Cleaned in Place:** No disassembly and reassembly which saves time and enables more frequent cleaning
- 6. No Secondary Waste:** Saves additional clean-up labor and disposal expense. The only clean-up required is the material being removed
- 7. Non-abrasive, Non-flammable and Non-conductive:** Won't damage most substrates and can be used safely on electrical components
- 8. Environmentally Friendly:** Meets USDA, FDA and EPA guidelines and eliminates the expense of environmental clean-up
- 9. Employee Safety:** No exposure to chemicals or grit media for those in the area
- 10. Efficiency:** Not as labor intensive as water, media or chemical wipe-down



NO SECONDARY WASTE

The dry ice pellets evaporate on contact, so that the only clean-up required is the debris removed by blasting. There is no water to reclaim, no solvents or other chemicals involved, no heat, and no media or secondary waste to clean up or contain.

FACT:

A popular method of cleaning delicate surfaces is soda blasting. The downside is that the time spent blasting is matched, if not doubled by the time it takes to clean up the extra waste soda blasting creates.

Water and other media often become contaminated to the extent that special handling and disposal is required. This is an environmental, safety and cost concern.

NO WEAR OR DAMAGE

Traditional cleaning methods like water, other media, chemicals, and hand tools wear down surfaces and are not practical for cleaning assembled equipment with electronic or delicate components. Dry ice won't abrade, wear, pit, or erode equipment surfaces. This extends the useful life of equipment and enables it to be cleaned in place without disassembly or extra containment expense. Control panels, circuitry, glass, electrical wiring, delicate coatings and precision surfaces are all safely cleaned using dry ice.



ATTENTION FOOD PROCESSORS!

Our process can significantly increase your success with your next audit or plant inspection.

- **SQF Code Edition 7.1, Level 3 (Category 30) First In The World**
- **HACCP Certified**
- **SQF Practitioners on Staff**

Polar Clean's planning process is second to none. Every project goes through an extensive site evaluation and Composite Risk Analysis. Our controlled approach ensures the promise of dry ice blasting:

CLEANER. FASTER. SAFER.

DRY ICE BLASTING VS TRADITIONAL CLEANING METHODS

CLEANING METHOD	NO SECONDARY WASTE	NON-CONDUCTIVE	NON-ABRASIVE	NON-TOXIC	EFFECTIVENESS
DRY ICE	●	●	●	●	Excellent
SAND BLASTING		●		*	Good
SODA BLASTING		●		*	Good
WATER BLASTING			●	*	OK
SOLVENTS/CHEMICALS		N/A	●		Limited
MECHANICAL CLEANING	●	N/A		N/A	Limited

* Upon contact, traditional blasting materials become contaminated when used to clean hazardous substances and objects. These blasting materials are also then classified as toxic waste and require appropriate safe disposal.

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