



Dry Ice Blasting for Graffiti Removal

Removing graffiti without grit, water or harsh chemicals

Graffiti damages the appearance of buildings, vehicles and street furniture, and the longer it stays, the more it attracts. Owners want it gone quickly and without damaging the surface underneath.

The usual methods are chemical removers, pressure washing, abrasive blasting or painting over. They work, but chemicals and run-off can be a problem, abrasive blasting can leave a permanent 'shadow' of the graffiti etched into the surface, and painting over leaves patches.

Dry ice blasting offers a different approach. In this guide I want to explain how it works, where it delivers real advantages, and where other methods may be better.

What is dry ice blasting?

Dry ice is solid carbon dioxide (CO_2) at around -78.5°C . Instead of melting, it turns straight back into gas when it warms, a process called sublimation.

In dry ice blasting, small pellets of this material are fired at a surface using compressed air. Three things happen on impact:

- **Impact energy** breaks up and dislodges the deposit.
- **Thermal shock** makes the residue brittle and weakens its bond to the surface beneath.
- **Sublimation** turns the pellet into gas, which expands rapidly and lifts the residue away from behind.

The pellets disappear into the air. The only thing left to collect is the residue that has been removed. There is no water, no detergent and no blast media to clean up afterwards.

Where dry ice blasting really outperforms traditional cleaning

1. Non-abrasive

Dry ice removes paint without grinding into the surface, so it is less likely to leave an etched outline than abrasive blasting.

2. No grit or run-off

There is no grit to clear up and no water carrying paint and chemicals into drains.

3. Works well on smooth surfaces

Graffiti on metal, painted surfaces, glass, signs, vehicles and smooth stone often comes off well.

4. Fewer chemicals

On many surfaces graffiti can be removed with little or no chemical remover.

5. Mobile

We come to the site with our own power and air.

Environmental credentials

Dry ice blasting can help on several fronts.



- **Recycled CO₂.** The CO₂ used to make dry ice is typically recovered as a by-product of other industrial processes, such as fertiliser production and fermentation, rather than produced specially. Blasting returns it to the atmosphere it would otherwise have reached, so the process adds no new CO₂ of its own.
- **No contaminated run-off.** No paint and chemicals washed into drains.
- **No blast media waste.** No grit to send to landfill.
- **Fewer chemicals.** Less use of graffiti removers.

At a glance

	Chemicals, washing and abrasive blasting	Dry ice blasting
Surface damage	Abrasives can etch the surface	Non-abrasive
Run-off	Paint and chemicals to drain	None
Media left behind	Grit	None
Chemicals	Often needed	Little or none on many surfaces

Typical applications

- **Commercial premises:** shutters, doors and walls.
- **Vehicles and trailers:** lorries, vans and trailers.
- **Signs and street furniture:** metal and painted surfaces.
- **Smooth stone and masonry:** walls and monuments (tested first).
- **Railway and transport assets:** bridges and equipment.

Our setup at Vortex Ice Labs, and why it matters for graffiti removal

Vortex Ice Labs is a fully mobile service. We bring a complete, self-contained system to site, so we do not need your power or compressed air. The air passes through four stages before it reaches the surface.

- 1 **Compressor.** This supplies the large, steady volume of air needed to drive the pellets. Consistent flow means consistent cleaning, with no drop in performance halfway through a job.
- 2 **Aftercooler.** Compressing air heats it, and hot air carries a lot of moisture. The aftercooler cools the air straight away so that moisture condenses and can be drained off. Without it, water would freeze inside the blaster, causing pellets to clump and block, and could be sprayed onto the surface being cleaned.
- 3 **Filtration.** Filters then remove the remaining water, any oil carried over from the compressor, and fine particles. This matters here. The aim is to leave surfaces clean, not to add an oily film.



- 4 **Dry ice blasting unit.** The pellets are metered into the conditioned airstream and delivered through the hose and nozzle. Pressure, ice feed and nozzle choice are adjusted for each task, from glass and painted surfaces to masonry.

Every stage protects the result. Clean, dry air means clean surfaces.

Working safely, and where it fits

Dry ice blasting is a powerful tool, and we plan each job before we start.

- **Ventilation.** As the ice sublimates it releases CO₂ gas. In enclosed or poorly ventilated areas this has to be managed with suitable airflow and, where needed, gas monitoring.
- **Noise and PPE.** Blasting is loud, and operators use hearing protection, eye and face protection, and insulated gloves. People nearby need to be kept clear of the work area or protected too.
- **Containment.** Removed paint can travel, so we protect nearby surfaces, people and traffic, and clear up afterwards.
- **What it will not do.** Graffiti on porous brick and soft stone can soak in, and dry ice may not remove it completely. On painted surfaces, the paint underneath may lift as well. We test a small area first and give you an honest view, and may recommend combining methods.

Used this way, it is most valuable on smooth and painted surfaces, vehicles and signs, and where run-off and grit must be avoided.

Final thoughts

Owners need graffiti removed quickly without damaging the surface. Traditional methods will always have a role, but they bring chemicals, run-off and the risk of ghosting with them.

Dry ice blasting removes many of those trade-offs on the right surfaces. We test first and tell you honestly what to expect.

If you have graffiti to remove, I would be happy to visit and test a small area. Get in touch with us at Vortex Ice Labs.

Ian Glover, Vortex Ice Labs

Tel: 07438 409188 | Email: ian@vortexicelabs.co.uk

Web: www.vortexicelabs.co.uk

[#GraffitiRemoval](#) [#Property](#) [#FacilitiesManagement](#) [#DryIceBlasting](#) [#VortexIceLabs](#)