

Frequently Asked Questions

What is soda blasting?

Soda blasting is a process where a surface is cleaned, rust is removed, or coatings (of any kind) are stripped from a substrate (the surface beneath the material you are trying to remove). The soda blasting compressor propels a bicarbonate-of-soda based media via compressed air onto the surface to be cleaned. This process gently removes the material without harming the substrate and can be done wet or dry.

How was soda blasting developed?

Back in 1972, when New York State engineers were looking for ways to clean the Statue of Liberty, they had many concerns involving issues of the environment, waste disposal, and protection of the statues surface itself. Any use of abrasive material to clean the surface would have been very harmful to the soft copper plates, let alone the waste in the surrounding harbor. Soda blasting was invented and proved to be the ideal solution. Just like the surface of the Statue of Liberty, this non-abrasive action allows soda blasting to be used on surfaces that currently popular abrasive media would damage, i.e. aluminum, stainless steel, brick, stone, glass, fiberglass, wood, some plastics, seals, bearings, splines, radiator cores, transmission cases, and hydraulic cylinders. In some cases, using dry blasting, it is not necessary to shutdown electric motors and pumps.

How does soda blasting work?

The sodium bicarbonate used in the blasting process is a larger particle than the baking soda used in the food industry, although it is the same purity. The particles are propelled by compressed air through specialized blasting machines. Soda blasting particles remove surface contaminant by the energy released as the particles explode when pressure-driven into contact with the contaminant surface. The resulting energy release disrupts the contaminant surface and blows it away – thus leaving the substrate completely unaffected. Air pressures and hence, soda blasting particle velocity, can be varied from as low as 20 psi (pounds per square inch) on soft bases to 150 psi or more on hard surfaces. The operator sets the air pressure depending on the nature of the substrate and the type of contaminant to be removed.

Can soda blasting cause damage?

If used correctly by a trained operator, the likelihood of the soda blasting causing damage is highly unlikely. As part of their training, operators are taught to evaluate the surface to be cleaned, as well as the surrounding surfaces carefully, and to blast a test patch if required. Soda blasting has been performed for over 30 years in the USA, and there are excellent resources available for reference. Using soda blasting on a surface that is softer than the soda, i.e. some plastics, soft wood, leather, vinyl etc will cause scratching and surface removal. Soda blasting operators will always make enquiries to establish whether certain surfaces are suitable for the process.

Do I have to mask off areas like glass or chrome trim like sand blasting requires?

Hardly ever. In fact, unlike the abrasive property of sand, bicarbonate-of-soda does not harm window glass or the rubber seals around the glass. However, it may be harmful to certain types of plastic trim, because you are using 150+ pounds of pressure in some instances. For this reason, you may want to remove or protect those possible areas. Other areas that may need protection are: wood, soft plastic, membranes and electric components.

Is water used as part of the soda blasting process?

Water is not often used as part of the cleaning process, but more as a dust suppressant. Water is sometimes used to activate the baking soda to allow its cleaning qualities to be realized as well as its virtues as a blast media. For softer substrates such as wood, water reduces any cutting action by as much as 20 to 30 percent thus preventing substrate damage. When water is used with the soda blasting process it is not used to propel the blast media. It is used to provide a moist surface to prevent dust, activate baking soda and reduce cutting action of soda. This results in only a tiny amount of water being used in comparison to water blasting/pressure washing processes. When water is used as part of the soda blasting process, the water literally trickles out of the end of the hose, using approximately 3.5 liters per minute.

Examples of water usage:

- **Boat hull cleaning and preparation** – none – dust and paint / anti-foul are contained in a purpose built plastic tent and disposed of in an environmentally safe way. Not using water near public waterways is a major advantage of cleaning boats with soda blasting.
- **Food preparation equipment cleaning** – sometimes – activating the cleaning quality of baking soda is generally advantageous. Water is also used after blasting to wash soda and contaminant remnants away.
- **Graffiti removal** – generally none – may be used as a dust suppressant in confined areas.
- **Vehicle paint stripping** – generally none – other than to wash away soda remnants.
- **Monuments** – generally none – unless required as a dust suppressant.
- **Masonry** - generally none – unless required as a dust suppressant.
- **Machinery** – generally none – other than to wash away soda remnants.

Is bicarbonate soda environmentally safe?

Yes, otherwise known as baking soda and used in everyday cooking. Its alkaline properties could harm plants and vegetation if not rinsed properly and all areas should be washed down with water during the cleanup process. All remnants of the paint or other contaminants may need to be collected or filtered, but the soda itself has no impact on the environment and is completely safe. The Soda Blasting method is endorsed by the USDA (United States Dept of Agriculture) and the FDA (Food & Drug Administration) and is Kosher approved.

How do I remove the left over paint? (Or grease, waste. etc)

Clean up is easy. The soda dissolves in water when you spray the area down. The waste product that is left behind is usually in such small particles that when it dries, the dust can simply be vacuumed or swept up.

Or, by using filter cloth or an old sheet under a small project, the waste will stay on the sheet. Disposal of waste may fall under hazardous material classification, especially when dealing with old lead based paints or oil, grease etc. For this reason, clients will need to check with local regulations in order to make sure that any disposal will comply with local regulations regarding these materials. Most local councils have hazardous disposal sites open to the general public, specifically designed to handle waste oil, paint, and other materials that would fall under the hazardous waste classification.

What about noise?

The soda blasting process can be noisy as a large compressor is forcing air and media out of a relatively small exit. Soda blasting operators are required to wear ear protection at all times while blasting and anyone else in the immediate vicinity should do the same.

How long does it take?

It is hard to estimate the length of time required to soda blast without any details of the job. However, soda blasting, in most applications, reduces the normal cleaning time significantly – in some cases in 1/10 Th of the time. Preparation and clean up are minimal, thus reducing the completion time.

How much does it cost?

Soda blasting is usually charged at an hourly rate. Any job that takes less than one hour is still subject to a one-hour charge as travel and preparation will likely be included. Marine vessels are often charged by the size and may include some preparation and cleanup time as all blast material is contained. The many benefits of Soda Blasting, including but not limited to, the quality of surface finish, make the operation cost effective in pretty much all cases.