To blast or not to blast?

Let's face it….as Restoration Contractors we've all faced that decision.
Weighing your options – there's grinding, scraping with a wire brush, sanding, wiping – media blasting is probably your best option. But, the clean up of secondary waste ***after*** the blasting could prove to be more costly than the blasting. Make sense? Let me give you a hypothetical situation.

You have a garage fire where you have to clean extensive soot and staining from the concrete block wall. You hire a subcontractor who specializes in soda blasting. When he's done, there's so much soda in the garage, the yard, pretty much all over, that the neighbors down the end of the block are even complaining! The ground everywhere is grey and you can even taste it in the air! You are forced to send your own crew of Technicians over immediately to perform some damage control and try to clean it up. The Insured is not impressed, the adjuster is not impressed and you're pretty sure that a government Ministry somewhere would likewise be unimpressed.

STRONE™
Restoration Professionals

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STRONE Restoration Professionals

Operating as STRONE since 1987, we have built a solid reputation for quality and service as residential and commercial restoration specialists to the insurance industry. We provide services throughout Ontario.
Rob Isbell, owner and VP Operations in Thunder Bay, continues the tradition of commitment to excellence of workmanship and dedication to customer service. At STRONE we believe that these two principles are essential for continuous improvement and customer satisfaction. Rob has assembled a first class team of trades and technicians, now in their sixth year of operations.

Rob partnered with Karen of STRONE Thunder Bay in the development of this article.

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Fortunately, the Restoration industry is changing – old methods are being replaced with new technologically advanced systems and more specialized equipment. Today's new technology not only makes us better Restorers, but also more cost effective ones and that is beneficial to everyone – Contractors, Insurance Providers and Homeowners.
The example above may seem extreme, but in my experience sometimes the *remedy* is worse than the *disease*. Soda & Sand Blasting has been used for years in fire restoration as a method of cleaning soot from surfaces, such as concrete, brick and wood. But, the residue left behind makes a secondary cleaning necessary. Today, alternative types of media blasting give the Restorer better options. The best of these, in my opinion, is the Dry Ice Blasting system. The applications for this cleaning system are possibly endless and include mould remediation, soot, grease, paint removal and more. It's fast, very effective and the best part is that the blasting media disappears in the process.

How Does It Work?

The system uses small pellets of dry ice forced under pressure out of a nozzle using compressed air. Part of the reason why this is effective at removing soot, mould and other materials is because of the extreme cold temperature of the dry ice, lower than –100°F (-73°C). This causes the material being removed to shrink and lose its ability to stick to the surface beneath. The conversion of the dry ice back to carbon dioxide gas also contributes to this effect. As the dry ice comes into contact with the warmer surface and converts to carbon dioxide gas, it increases in volume, expanding behind the material and forcing it away from the surface. Remarkably, as the dry ice sublimates into a gaseous form, it seemingly disappears! Sometimes, depending on the type of surface you are blasting, there may be small amount of fall out to clean up, but in my experience, this has been extremely minimal.

Advantages & Disadvantages

Disadvantage - PPE is required. Dry Ice Blasting is relatively safe, that is of course when Technicians are properly trained to operate the equipment and handle the dry ice media. But, the potential for exposure to inhalants such as soot, wood particulate, and mould spores means that care should be taken to properly contain the affected area and to make the donning of respiratory protection mandatory within the affected area. However, these types of procedures are already applied in a number of restoration situations, so they are not new to us.

Hearing protection is mandatory – this equipment is loud!

Disadvantage – Oxygen depletion. We all require a good oxygen supply (approx. 17%) to breath and live and Dry Ice Blasting depletes oxygen levels by increasing the volume of carbon dioxide in the air. However, with some precautions, this does not need to be an issue. For one thing, carbon dioxide is heavier than oxygen and so will fall to the bottom portion of the airspace.

Negative pressure applied on the blasting area in the form of a vented Air Scrubbing Unit or High Velocity Air Movers directed outdoors will counter-act this effect. An open window allowing for a fresh supply of oxygen will also help maintain appropriate oxygen levels. I also recommend the use of a gas monitor that provides a constant reading of both oxygen and carbon dioxide levels and will alarm if oxygen levels become dangerously low or the volume of unsafe gases becomes dangerously high.

Advantage – fast & effective Mould Remediation. The advantages to using the Dry Ice Blasting system are numerous. In Mould Remediation, it eliminates the application of chemicals, solvents or any additional wetting of surfaces that you are trying to dry. The process does not add moisture to the air or the surface and it can be completed in a fraction of the time compared with other acceptable remediation cleaning practices. Dry Ice Blasting in Mould Remediation is less time consuming and certainly preferable to the repeated HEPA vacuuming, damp wiping and application of anti-microbial that we are accustomed to. Furthermore, it grants complete access to hard to reach places, attics, crawlspaces and multiple angled surfaces of wood framing.

Advantage – preservation of surface integrity. In all applications, the integrity of the targeted surface is maintained. Dry Ice Blasting does not cause any further damage to the surface, where more abrasive media, like sand or soda, might. It will not erode most wood, concrete or brick surfaces and corrosion of metal or electrical components is not a concern.

Advantage – clean & thorough Fire Restoration. The access that the Dry Ice Blasting system allows to hard to reach places, angles and corners, around nails and rough surfaces makes it exceptionally effective for clean-up of fire damaged structures. This system will remove soot from brick, concrete block, wood framing and more quickly, completely and without generating secondary waste.

Although cost is obviously one of the primary concerns for both Insurance Adjusters and Restoration Contractors, when you weigh the issues of time and cost, the most compelling benefit of the Dry Ice Blasting system is apparent. Ultimately, we are speeding up the restoration process and that not only keeps the Homeowners happy, but the Adjusters and Contractors as well.