USING STARBLAST™ ABRASIVES EFFECTIVELY

Optimal blasting conditions for Starblast™ and how to achieve them differ considerably from other blasting abrasives such as coal slag or silica sand. The reason for these differences are due to the nature of the staurolite particle. Since those particles are heavier than most sands and are sub-angular (rounded) instead of having sharp points, Starblast removes rust, scale and coatings by impingement or peening. The speed the Starblast particle is moving when it hits the surface being blasted along with its heavy weight causes considerable energy to be transferred from the particle to the surface, knocking off the rust, scale or coating. This action is different from sharp particles of sand or slag that actually cut through the coating.

Understanding the way Starblast works helps explain what needs to be done to optimize its performance. As you may have read in our literature, we recommend a minimum air pressure at the nozzle of 90 psig (higher pressures are better, e.g. 110-130 psi, max ~150psi). Also, you must use a very lean mixture of Starblast in the air stream. We recommend you close the abrasive feed valve to the point where you can hardly see the Starblast exiting the blast nozzle, then close the feed valve just a little more. (If you start to hear a whistling sound from the nozzle you have closed the valve too much.) When blasting with Starblast, be sure you blast at the proper angle, about 15-30 degrees off perpendicular, and at a distance of 2-3 feet. It may also help if you reduce your blasting nozzle diameter by 1/16 of an inch from what you normally use with sand or slag. It's best to use a new nozzle when you begin using Starblast. Expect typical profiles to be 1.8 to 2.3 mils.

If the Starblast doesn't seem to be working well, blasting is too slow or it has difficulty removing the coating, make small adjustments to the abrasive feed. In most cases, the best adjustment is to REDUCE the amount of Starblast being fed to the blast nozzle. This is opposite to what most blasting abrasives require for improved performance. However, if too much Starblast is fed it will overwhelm the air flow and the sand will come out the nozzle in slugs. Since Starblast is heavier than most sands, the same amount of air accelerates less Starblast to the proper particle speed for efficient blasting than other lighter abrasives. Starblast particles at a lower blasting speed will reduce efficiency greatly. Remember, more is not better with Starblast.

It may take you and your blasters a little while to get used to using Starblast properly. However, once used properly and after seeing its benefits, most users prefer it over other blasting abrasives.

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