



THE BASICS OF ABRASIVE BLASTING

SIX QUESTIONS TO ASK BEFORE CHOOSING AN ABRASIVE

Q1. For this particular job, will abrasive blasting be used for surface preparation or as a cleaning procedure?

The difference between these two procedures are as follows:

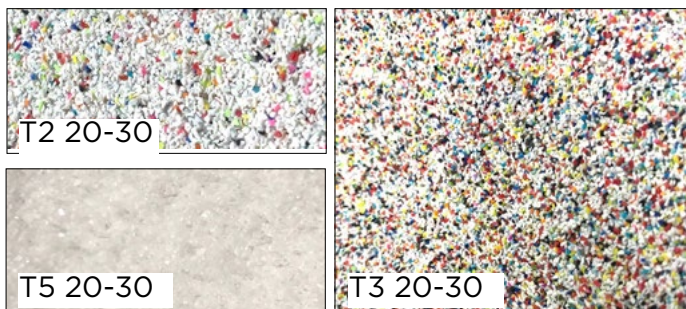
- When abrasive blasting is used as a surface preparation technique, the intention is to remove all surface contaminants and also prepare the substrate to receive a coating.
- When abrasive blasting is to be used as a cleaning procedure, then the intention is to remove the surface contaminants, while leaving the substrate untouched.

Q2. Will it be possible to reclaim and recycle the abrasive, or will it have a single use only?

The major deciding factor here is cost. The cost of abrasives, while very effective, are uneconomical to use if recycling is not an option.

Q3. Will the worksite be dust sensitive?

The amount of dust generated by different abrasives varies widely. Some excellent types of abrasives are available that are specifically graded to reduce dust.



Q4. If blasting for surface preparation, what surface profile is required?

All coatings have a recommended surface profile (roughness) specification. Excess surface profile can shorten the life of a thin-film, low-build coatings, insufficient profile can cause delamination of high-build coatings.

Q5. Will coating adhesion be affected by surface contamination?

Some abrasives leaving a cleaner surface than others, which can have a substantial impact on coating adhesion.

Q6. Which abrasive provides the maximum productivity?

Abrasive particle size and shape all have an effect on blasting speed. Some factors to consider:

- The ideal abrasive size is where the largest particle is equal to the size of the thickness of the coating to be removed. If the particle size is too large, the “hit rate” is reduced because the grain count in the pot is lowered. If the particle size is too small, the speed of cutting through the old surface is reduced.
- Grain toughness is a term given to describe it’s durability and recyclability. A tougher grain converts more energy into the removal of the old coating, while a weaker grain is more likely to disintegrate on impact.
- Particle shape can either be rounded or angular. The more rounded the particle is, the more contact area it has, which increases the surface removal speed.

CAUTION!! Blasting with Silca sands, such as beach sand, river sand and any other Crystalline Silca sand may cause serious injury or be fatal. Crystalline Silca is recognized worldwide as a class 1 carcinogen. Slag and coal abrasives have traces of heavy materials like Beryllium and Arsenic which can find their way into the blasters respiratory system. Long-term or repeated exposure over years to the toxins have been linked to serious and life threatening health issues.



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