Tips For Powder Coating

Powder coating is the youngest of the surface finishing techniques that is still in use today. It was first used in 1967 in Australia by Allan Davies.Powder coating is the simple technique of applying dry paint to a part such as metal or plastic, and after the final coating is the same as a finished 2-coat wet paint job. Powder coating can be applied in two ways; either Reliable Standard Heating & Air by lowering an item into a bed of powder which may or may not be electrically charged, or the powder paint is electrically charged and sprayed onto the part. After being coating with dry paint, the part is placed in an oven and the powder particles melt and combine to form a permanent layer of paint.There are two main types of powder available to use, either the thermoplastic powder which re-melt when heated, and thermosetting powders that will not re-melt when heated. This is because during the initial heating process a chemical cross-linking reaction is triggered so that the bonds *Reliable Standard HVAC contractor* cannot be broken.The foundation of any high-quality coating job is preparation. Most powder coating failures are linked to a poor preparation process. It is important to know that the preparation treatment is different for different materials.For all applications the preparation treatment for aluminum is to clean, rinse, etch, chromate, rinse and denim rinse. Oils and greases can be removed by weak alkali or neutral detergent solutions and the surface is etched to remove heavy oxides. After rinsing, the aluminum is dipped into a chromate or phosphate solution to form a adaptation coating. After rinsing the aluminum it is rinsed in de-mineralized water which gets rid of chemical salts on the aluminums surface. This process has two functions which include giving the aluminum a surface which is better for adhesion and protects the aluminum from under the paint corrosion.If you are preparing a steel part, the steps you take to prepare your part are as follows: clean, rinse, etch, rinse, grain refine, zinc phosphate, rinse and acidulated rinse. The grain refiner is used after acid cleaning of steel surfaces and before zinc phosphate, because otherwise the zinc phosphate coatings produced will be very coarse and have a low adhesion ability. The etch is required to remove the zinc corrosion products which begin to form almost immediately the zinc is removed from the galvanizing kettle. The grain refiner ensures a fine phosphate is produced.

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