

Cleaning and Waxing Bronze Sculpture

1. The Nature of Patinas: Patinas are thin films of color created by the application of heat and chemicals to the surface of a bronze. The color comes about from the reaction of chemicals with the copper in bronze and is known as a conversion coat. This is different than paint where the surface is covered with a pigmented layer which adheres to the metal rather than becoming part of the metal. The application is done at the foundry and requires skill and craft. Patinas that have been cared for get more handsome as they age and protect the bronze sculpture against corrosion. The best method for caring for patinas always includes regular cleaning and waxing.

2. General: The cleaning and waxing of bronzes is important to both the appearance and the longevity of the bronze. Waxing should be done at least twice a year, in the spring and fall. Ideally it would be done every one or two months depending on the weather and the surrounding conditions. If dust, dirt, or droppings build up on the sculpture it is time to wash. If the sculpture looks dull and flat it's time to wax. Indoor sculptures can be dusted and brushed before they are waxed. Outdoor sculptures should be washed. Washing before waxing removes dust and dirt and keeps it from being covered with wax and sealed into the sculpture.

3. Washing: Any anionic soap can be used. Joy Liquid works well in combination with soft, natural bristle brushes. Dust on sculpture can be removed with a cloth or duster. Gritty accumulations must be washed off with clear water or a weak soap solution. It is important to rinse any residue from the sculpture by flooding with clear water.

4. Deposits and Accretions: Outdoor sculptures are often placed near or under trees. Tree droppings can be tenacious and actually shorten the life of a patina. For problems of this nature the best policy is careful and regular observation and prompt cleaning. Bird droppings are particularly destructive to patinas and should be removed as soon as they are discovered. Any dropping that has hardened onto the surface of the sculpture should be softened by placing a damp paper towel on the deposit. For stubborn deposits a teflon scraper, a stiff natural bristle brush, or even the edge of a plastic credit card can be used as a scraper. If none of these work, try using a solvent such as lacquer thinner or naphtha to soften the deposit. Never use abrasives or chemicals on bronze surfaces.

5. Waxing: The actual waxing of the sculpture consists of putting a thin, uniform layer of wax on the surface of the sculpture. Any clear quality wax can be used. Butcher's clear bowling alley wax is available everywhere and works well. Avoid waxes that are colored, for they will change the appearance of the patina. Buffing the sculpture is achieved by polishing the wax on the surface of the sculpture rather than trying to rub the wax off the sculpture. Start gently and then as the surface gets a sheen, rub more vigorously. First time waxers should wipe most of the wax off their brushes with a paper towel before applying wax to the bronze. This prevents clogging fine detail with wax and ensures a thin, uniform coat.

6. Conditions for Proper Waxing: An ideal day for waxing would be a cloudy day with the temperature between 70 and 80 degrees F. The sculpture should be dry and cool to the touch. In the summer, waxing should be done on cool mornings or late afternoons. In the spring and fall do not wax at temperatures below 60 degrees F. At those temperatures it is difficult to apply a thin, uniform layer of wax. A final word of caution - If you need or want to try a new method or product to help clean and wax the sculpture more quickly and easily, experiment in a small area that is hidden from view. If that succeeds, it is probably safe to proceed on the whole sculpture.