

**KORING 745-1***Copper Alloy Corrosion and Patina Remover***Purpose:**

The agent is used for cleaning metal products made of copper alloys (bronze, brass, copper). Not suitable for iron alloys. It removes oxidation and hydrolytic products of the reaction of copper alloys with the surrounding environment (patina).

**Application:**

It is necessary to degrease the object before application. If thicker layers of greasy dirt (e.g. greasy soot) are deposited on the surface of the object, we recommend washing them before using the product. The product is used in plastic or glass containers. Metal ones are not suitable. KORING 745-1 is most often applied by immersing the object in the bath of the agent. For weaker patina layers, however, it can be applied with a brush, spray or saturated wash cloth. When applying, care must be taken to ensure that the layer of the product is uniform, otherwise there is a risk of uneven removal of the patina – formation of smudges, stains, etc.

Due to the high efficiency of KORING 745-1, it is necessary to constantly check the condition of the object to be cleaned. In areas of heavier fouled surface, the process can be accelerated by cleaning with, for example, a plastic brush. Ultrasonic baths can be used advantageously. Once the necessary cleaning and removal of the patina has been achieved, interrupt the process and wash the object with water that does not contain halogen ions.

Then dry quickly so that the drips do not form maps on the cleaned surface. Drying can be done with absorbent material and then drying at room temperature, or by blowing with dry pressurized air, or in a drying chamber, or with a stream of warm air (hair dryer, hot air fan).

If a uniform glossy surface of the object is required, it is polished using common mechanical procedures, e.g. polishing paste.

KORING 745-1 contains a corrosion inhibitor and a passivator that serve as protection for the cleaned metal surface during the cleaning process. When rinsing, the majority of it is removed. Therefore, it is advisable to preserve the cleaned and possibly re-polished object against further corrosion. For this purpose, the KORING 141 or KORING 201 or KORING 141-CLP are used.

The KORING 745-1 can be used repeatedly. Its depletion is indicated by a change in colour to greenish. The agent is exhausted if it has greenish colour and no change is visible on the metal surface within 2 hours after application.

**Warning:**

KORING 745-1 is an irritant. Therefore, protect your hands with gloves, your eyes with goggles and your respiratory tract with a respirator unless there is sufficient ventilation. After the agent has been swallowed, induce vomiting, drink ample amount of clean water and call on a doctor. After contact with eyes, rinse them with clean water and call on a doctor. When choking sensation after breathing, take the affected person out to fresh air.

Once the product surface is cleaned, it becomes susceptible to further chemical reactions. Therefore, it is recommended to wear protective gloves even after rinsing to avoid fingerprints on the metal surface and thus deterioration of the finish.

Objects can be attacked by chemical reactions unevenly and to different depths. Therefore, even after cleaning with KORING 745-1, stains or maps may appear on the metal surface. These are not caused by insufficient removal of corrosion products (patina), but by differences in metal porosity or depth or other crystallinity due to thermal stress. Such locations then have different optical properties. Therefore, we recommend that the surface of the object be polished by mechanical means after cleaning – not chemically, and subsequently preserved.

**Storage:**

Store in plastic containers out of reach of radiant heat and UV radiation. Storage temperature 4-40 °C.

**Disposal:**

Collect the spent KORING 745-1 bath and hand it over to an organisation authorised by law for the disposal of hazardous waste. The spent bath contains high levels of copper ions and is therefore hazardous to the environment.

**Expiration:**

3 years in a closed container.