

PAINT Policy for Metal Castings

To provide maximum value for the customer, ABT, Inc. inventories epoxy coated metal castings which are predominately sold for interior applications only. Castings that are predominately used for exterior applications are not coated. At an increase in cost and delivery time, all castings are available either epoxy or galvanized coated. Contact ABT for your special coating requirements.

There are several reasons for this:

Uncoated

1. Casting quality is easier to visually determine on a bare casting than on a painted casting. Holes, porosity and other manufacturing defects or their repair can be hidden by paint. Some governmental groups do not allow coated grates for this reason.
2. Unnecessary cost is avoided for most exterior applications. Century old uncoated castings are still in service today.

Coated

1. Interior applications usually have higher probability of chemical exposure requiring additional protection for the castings. Appearance is also a more important consideration.
2. The development of the casting patina is more gradual and graceful if the casting is painted reducing the probability of discoloring adjacent surfaces.
3. Painted parts maintain a fresher appearance while in Distributor's inventory.

All ABT's grates are shot blasted at the foundry to remove the casting sand, etc. to give a clean and uniform appearance to the casting. The initial rusting of uncoated castings is bright orange in color because the iron in the casting alloy at the fresh surface of the castings converts to iron oxide. The iron oxide (rust) is weak and is easily removed. When this surface of iron oxide is removed, the silica in the casting alloy remains at the surface of the casting. The silica is not affected by typical moisture and weathering. Over time and exposure, the iron at the surface converts to iron oxide and sloughs off leaving a silica rich surface protecting the casting from further rusting. This silica rich coating is the final stage giving cast iron and ductile iron their dark patina. This is the usual appearance of manhole covers and other exterior cast iron castings after they have been in service for some time.

The above patina development can be disrupted with chemical exposure. Certain chemicals such as strong acids remove the silica from the surface. The rusting process repeats itself with each exposure of the chemical. The total casting can be consumed under these conditions.

The grades of ductile and gray iron used in ABT's castings are standard ASTM alloys. Foundry practices and alloys are controlled by industry standards for all manufacturers of grates, frames, and covers.