

Are your customers complaining about receiving rusted parts? Are you spending time and money on expensive sand blasting, acid washing and other rust-removal processes?

If corrosion and rust on metal parts are recurring problems for your business, you need a quick solution.

## Follow these 14 essential tips to prevent corrosion and improve your image as well as your bottom line:

- Keep cleaning solutions and metalworking fluids clean to reduce or eliminate small metal particles sometimes referred to as "dirt" or "swarf." These particles, when not properly removed from metal, form a galvanic corrosion cell where rust occurs.
- To protect ferrous metals from corrosion, maintain cleaning solutions with a pH of at least 9.0.
- To protect non-ferrous metal parts, such as brass and bronze, maintain cleaning solutions with a pH of 7-7.5.
- If you are using water in your cutting or cleaning fluids, switch to deionized or distilled water.
- Place parts in a wire basket to dry. Forced air, heat and vibratory action dry parts more quickly.
- Do not stack parts on top of one another until completely dry. Parts corrode when they are in contact with each other in tote bins. Corrosion is caused by fluid behaving as an electrolyte and forming a galvanic cell between the metal parts.
- Keep metal parts away from industrial air contaminants, such as exhaust from lift trucks.
- 8 Keep metal parts away from heat-treating areas. Byproducts from heat-treating are corrosive to metal.
- Keep the temperature in manufacturing and shipping areas constant. Every 10° C increase in temperature doubles the corrosion rate.



- Keep relative humidity in manufacturing and shipping areas constant and as low as possible. Fluctuations in humidity and temperature create condensation and accelerate corrosion.
- Packaging personnel should always wear gloves while handling metal parts because chlorides and acids are often present on human hands.
- Parts should be clean and free of fingerprints before packaging.
- Be sure that metal parts do not come in direct contact with wood pallets, corrugated boxes or untreated paper.
- Package metal parts immediately in VCI paper or VCI poly bags to keep parts corrosion-free for years.

Use these tips to alter your current metal parts packaging procedures, and consider the effectiveness of your current anti-corrosion packaging solution.





**Protect Every Part** 

