

# Conservator Hack for January 22, 2020

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## When the Rubber Meets the Collection

Rubber has had many uses since the vulcanization of natural rubber was discovered by Charles Goodyear in 1844, and artifacts containing natural rubber and synthetic rubber are commonly found in museum collections. Buttons, combs, machinery gaskets, horns, military paraphernalia, eyeglass frames, moulds, clothing, tools, household goods, adhesives and toys can all be made from some form of rubber. You may have a rubber artifact that has become soft or inflexible, or that smells of rotten eggs. There may be a bloom on the surface, or a stain underneath where it sits. It may be sticky to the touch.

The reason for this is that rubber is not a long-term, stable material and is estimated to last only about 30 years at room temperature. The process of deterioration is irreversible and rubber artifacts may only have about 30 years left after deterioration begins. You can sit the artifact on a silicone or Teflon sheet or on a Teflon/silicone ring from a hardware store so it doesn't stick to the shelf while you consider what to do with it. Cool or cold storage in a fridge or freezer is an option as a lower temperature can help reduce the rate of deterioration, if the artifact is small enough to fit, providing artifacts are packed carefully in sealed containers.

If a fridge or freezer is not available, you could store the rubber artifact at room temperature in a bag with silica gel desiccants that will keep it as dry as possible (10% is ideal) so as to reduce the rate of deterioration. RH sensor strips can be placed in the bag to give a visual report of the RH.

Polyethylene bags and/or sheets called Corrosion Intercept incorporate finely divided copper metal in the polyethylene. This acts as both a barrier and a scavenger that absorbs volatile sulfur compounds and acids. Although Corrosion Intercept products were designed to protect metals, they can also be used as the bag for storage of a rubber artifact in cool, cold or room-temperature storage. The bag changes colour as it reacts with gases, indicating when it needs to be replaced. The artifact will not be visible, so support the artifact inside the bag and put the bag on a tray. A piece of poly sheet containing Corrosion Intercept can also be placed inside a regular polyethylene bag.

The main website explaining the product's composition and uses can be found at ([Corrosion Intercept](#)). The product is available for purchase from Carr McLean:

<https://www.carrmclean.ca/catalogsearch/result/?cat=0&q=corrosion+intercept>

Storage can be a challenge if the artifact is sticking to whatever it is in contact with. PTFE (Teflon), PET (polyethylene) or Silicone sheets can be placed underneath it. Hardware stores may sell Teflon pipes, rings, etc. that could be used as supports and Teflon sheets might be found in cooking supplies houses.

More information on care of rubber artifacts can be found in the Canadian Conservation Institute Note 15/1 *Care of Objects Made From Rubber and Plastic* at

<https://www.canada.ca/en/conservation-institute/services/conservation-preservation-publications/canadian-conservation-institute-notes/care-rubber-plastic.html>

Jane would love to hear from you!

You can contact Jane by email [conservator\(at\)museumsmanitoba\(dot\)com](mailto:conservator(at)museumsmanitoba(dot)com) or by posting a question on our website at <https://www.museumsmanitoba.com/en/ask-a-conservator>