

Manganese Staining

Manganese staining can occasionally occur in brick containing manganese compounds that are intentionally added as a coloring agent or to help darken the color appearance of the brick. Manganese stains are typically tan or brown in appearance and are sometimes referred to as “tobacco stains”.

During the brick firing process, the manganese compounds undergo chemical changes resulting in compounds that are insoluble in water however, these compounds can have varying degrees of solubility in weak acids. Once dissolved these manganese compounds can migrate to the surface of the brick work and typically reacts with the alkaline mortar joints to create an insoluble brown or tan “tobacco” colored stain.

The staining is usually caused during the cleaning process but excessive rain during construction can also cause manganese staining to occur. To prevent this staining, it is recommended to protect wall cavities and keep brick cubes dry during construction. There are also proprietary chemical cleaners that help prevent manganese staining from occurring.

Once manganese staining has occurred there are proprietary cleaners such as *One Restore* by EaCo Chem which will readily and easily remove the stain. This stain removal process does not require an overall re-cleaning but can be done on a spot cleaning basis. After removing the stains, they typically will not reoccur if there is not any excessive water migration into the wall.

