Common Issues - Vanadium and Manganese

Vanadium and Manganese are naturally occurring minerals in certain seams of clay. Like soluble salts, they are released when an abundance of water must migrate through a masonry structure. In the case of NMD 80, their occurrence has absolutely no relation to the cleaning process of a sound, well built, wall.

The best way to keep these stains from occurring is to keep the brick covered before installation and do not allow rain to enter the wall during construction. If these two best practices are not adhered to, the next thing to do is to allow the wall to thoroughly dry before cleaning begins. Any stains that occur during the drying process will then be removed by NMD 80 in the normal cleaning process. This means there will be only one normal cleaning process to resolve the issue. In the case of exceptionally heavy staining, a trigger sprayer or pump sprayer of OneRestore™ can accompany the cleaner; and during the rinsing process any staining that is still visible can be immediately released, rinsed, and the regular cleaning process can continue. This means there will be virtually no extra cost to anyone to create a sell-able product.

Regarding the issue of the chemistry causing these stains, we have a simple test; take a brick that has stains present prior to installation and liberally pour undiluted NMD 80 on the surface. Allow it to dry and you will see that no stains occur and that the stains that did exist have been removed. We have done this worst case scenario on most brick we have encountered with this issue and have not seen it fail yet. The use of OneRestore™ should not normally be required if NMD 80 is used in the cleaning process. Our experience over two decades of use is that it will remove all stains on a well dried wall. We have documented many large projects, where the generally specified product was used and large amounts of staining occurred. Every time the wall was re-cleaned with NMD 80, the stains went away. There are a few jobs where staining did occur after NMD 80 was used as the cleaner.

These occurrences, observations and the simple test’s consistent results led us to the conclusions in this statement. They have been field tested over the past several years and have provided very accurate results.

Addendum:

The brick manufacturers do not put these minerals into the brick (unless they do so as a colorant to create a desired effect) and are not responsible for the stains occurrence.

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1. Picture shows extensive damage from leaking skylight flashing resulting in spalling of brick. Even with all the obvious water penetration, little to no staining is evident.

2. Close up of spalled brick showing deposits in brick which are the source of staining. These deposits exposed to air and weather consistently have no staining around them.

3. Area of brick showing staining under a sound roof. The water that caused this staining migrated slowly internally to a dry area and left the stains on the surface upon drying.

4. Our conclusion is that water saturation and migration to a dry area is the consistent cause of these types of stains - not the brick per se and not our chemistry. We have seen evidence of chemistry specifically designed to prevent this type of staining actually creating it and making the stain removal significantly more difficult to remove. These tests were done independently by a general contractor. Our NMD 80 subjected to the same tests succeeded and was approved.