Introduction

Walter De Maria’s Pair of Small White Paintings – an Extraordinary Cleaning Challenge

Unaltered paintings can prove difficult to clean if potentially water-sensitive materials are involved, and even more so if the paint is matte and monochrome white. A small-scale pair of paintings at The Menil Collection in Houston, Texas, by Walter De Maria (1935-2013) entitled “A Walk to Sign B” & “A Walk to Sign A”, 1961, 12 x 10 in. (36 x 25.4 cm), falls into this category. The works consist of white polyvinyl acetate paint on canvas with black plastic application. Improper handling prior to the Menil’s acquisition of the paintings, and a long period of storage in the artist’s New York studio, including prolonged water exposure, led to a disfiguring soiling layer: darkened fingerprints, soot marks and fuzzy-like spots. The nature of the paint required a cleaning method with minimal mechanical impact, water release to surface, and risk of residue.*

Nanorestore Gels®

The Nanorestore Gels® Peggy are based on polyvinyl alcohol (PVA) and polyvinyl alcohol/polyvinylpyrrolidone (PVA/PVP), opalescent and possess lower water retention abilities than the Nanorestore Gels® Dry. The gels come in standard-sized sheets of 5.9 x 3.9 in. (15 x 10 cm), or can be ordered custom-sized directly from the manufacturer (http://www.csijun.com/products/gel.html).

The idea behind the use of “rigid” hydrogels for cleaning is to combine cleaning fluids within a gel matrix that releases them in a controlled way onto the surface.[4] The Nanorestore Gels combine high water retention with great flexibility, allowing for a residue-free application. Pioneering studies on their applicability and safety for artworks have been done in recent years at Tate and Los Angeles County Museum of Art (LACMA).^[3,5]

Preliminary Tests

Materials Tested

- Dry cleaning materials: sponges, erasers (proved unsuitable)
- Aqueous solutions with buffered or adjusted pH (5.7, 6.0, 7.0, 7.5) and conductivity (1000-1800 µS/cm), with and without low amounts of nonionic surfactants and chelating agent (citrate)
- Delivery systems: Rigid gels (PEG 5, 30 min exposure; PEG 6, 20 min exposure) (see swab tests, while no adverse changes of the surface were observed. The surfactant and citrate test fluids were rinsed with acetic acid/ammonium hydroxide buffer at pH 5.7 and 1000 µS/cm. The delivery system that produced the best results in terms of cleaning efficacy and preservation of the surface quality were 4% agarose and both Peggy gels. The most significant cleaning effect was observed within the first 30 minutes, thus a longer exposure was deemed unnecessary. Peggy 5 was selected based on its higher water retention (compared to Peggy 6) for tests in larger areas, together with 4% agarose.

Larger test fluids

In areas measuring approx. 30 x 30 mm, sheets of 4% agarose and Peggy 5 were placed on the surface for 30 min under light weight. While agarose produced an insufficiently and unevenly cleaned surface due to its lack of conformity to the surface, the area cleaned with Peggy 5 was visibly lighter. Remaining dark scuff marks were reduced with swabs.

Cleaning Treatment

Treatments

1. Nanorestore Gels® Peggy 5 sheets ordered custom-sized, slightly larger the dimensions of the paintings
2. Soaked in deionized water for 4 days (water exchanged daily) and out to shape with openings for the plastic applications
3. Soaked in cleaning and rinsing solutions for 4 hours

Results

- Cleaning gels removed from container and blotted on both sides
- Gels placed on the painting, covered with Dartsk® and pressed gently to ensure close conformity with the surface
- Cleaning gels removed from paint surface after 30 minutes
- Rinsing gels removed from container and blotted on both sides
- Gels placed on the painting, covered with Dartsk® and pressed gently to ensure close conformity with the surface
- Rinsing gels removed from paint surface after 15 minutes
- All used gels placed in fresh deionized water for storage and future re-use
- Treatment repeated once more with fresh gels.