

TESTER OF PASTEL LIGHTFASTNESS GIVES TALK AT PSA

Seeks Volunteers to Press for ASTM Standards for Pastels

BY CLAIRE PAISNER, PSA

“UV light gets us all in the end, but in the meantime we should do everything we can to produce artwork whose materials are as stable as we can make them.”

The speaker was Mark D. Gottsegen, associate professor of art, University of North Carolina at Greensboro, addressing a group in PSA's studio October 8. Invited as part of Pastel Society of America's "open house" series, he gave a slide presentation and talk about his work with ASTM International (American Society for Testing and Materials). This organization deals with the development of voluntary standards for materials in wide sectors of industry and commerce, including artists' products.

Gottsegen has been particularly involved with the development of lightfastness specifications for pastel sticks, but the ASTM subcommittee which he chairs (D01.57) concerns itself with many areas regarding artists' paints and related materials, including health hazards. The subcommittee also tests products in a variety of media in which artists work. In fact, ASTM labeling for standards is already used on many art materials, but not pastel sticks — or papers, which are also subject to color change. Alterations over time can be gradual (which many don't notice), or colors can be stable for a while, followed by sudden change.

Thus his goal is to involve pastel

artists in the work of ASTM, a strictly voluntary organization, which one does not have to join as a member in order to attend its meetings and work on its projects. However, if one wants to vote on proposals and standards, then membership is required (dues are \$75 a year). Members of ASTM test art materials, develop standards for these products, and try to obtain voluntary cooperation from manufacturers and companies 1) to conform to these standards, 2) to label their products accordingly, 3) to inform consumers about risks, if any. In the case of pastel lightfastness, this would mean that the companies would adopt ASTM's methods for testing pastels and would develop a rating system for each stick based on these standards. Conformance to a standard will require full disclosure about the pigment content in every pastel (which some companies already provide on their color charts and/or on the wrappers of individual sticks).

25 Years of Work

Gottsegen said that when ASTM started investigating art materials about 25 years ago, the manufacturers would



A variety of testing instruments used by Gottsegen: from left, a lab-sized xenon tester, a salt-spray chamber, and a fluorescent light instrument

not divulge content. However, when the organization showed the companies that chemists could determine ingredients anyway, they started to reveal the content (but not the formula) of their products. Presently, a few brands have their own lightfastness rating system printed on each wrapper, often based on the "blue wool" test, which Gottsegen considers scientifically unreliable. Some companies do their own testing, some rely on testing by manufacturers who supply them with pigments. He praised Rembrandt and Schmincke, at least, for full disclosure of the pigments contained in each stick. Sennelier also identifies the pigments in each color. Gottsegen is trying to recruit pastel artists because he feels they are in the best position to convince pastel makers that it is in



A table top xenon tester with the door open and pastel samples inside

everyone's interest to produce lightfast colors in cooperation with ASTM.

White Paper on Wall

Gottsegen recounted his own experience with a piece of art in color pencil, which was given to him by another artist. He placed it in a dim hallway of his home, but it lost its color completely, leaving him with "a framed piece of white paper on the wall."

The speaker said he hopes to duplicate the recent success his group has had with businesses that produce color pencils. Over the last 10 years, ASTM standards have been developed for the lightfastness of color pencils; some companies have complied with these standards and will now label their products accordingly. As a result, these companies offer two grades of color pencil sets, one for those professionals who value lightfastness, and one for consumers who are not concerned with such properties. The former category is only slightly more expensive and tends to have fewer of the brightest colors. However, in many cases, substitutes for the fugitive colors were developed but at a higher cost, which many artists are willing to pay in order to assure a higher quality.

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60% Fail Test

Gottsegen and his group started investigating pastels for lightfastness about four years ago. Since it is impossible to test the thousands of pastels on the market, he placed samples of about 300 sticks from different manufacturers on Wallis paper, selecting primarily hues from middle value range, including some colors that he suspected of being unstable (reds, pinks, violets) and, to be fair, some he believed would

test favorably. Overall, 60% of the tested sticks failed the test as measured against specifications developed by his committee (the same ones that were applied to color pencils). His research has identified different levels of lightfastness, and the committee places products in Lightfastness Categories I or II. His testing is done with equipment that he has purchased and maintained with his own resources and whatever grants he has been able to obtain from independent sources. The machines do accelerated testing: about 400 hours of exposure produce results equivalent to, perhaps, 100 years of light exposure in a museum setting. He discusses his results privately with each manufacturer because his purpose is not to embarrass them but to obtain their cooperation. Until pastel companies adopt ASTM standards, Gottsegen thinks it makes sense for artists to test their own sticks by putting patches of color in direct light for three months and comparing them to identical patches that are tucked away in a drawer or box.

During the question and answer period the speaker was asked if UV-protected glass is effective. His answer was yes, if you can find out how long the UV coating is expected to last. He was asked if white pastels change color, to which he replied that some do. In response to other queries, he said that pastels are not completely opaque, and therefore underneath layers of unstable colors can affect the overall lightfastness; that fixative does not completely stop an unstable color from changing and often darkens some colors.

Gottsegen apologized for being the bearer of bad news. Sometimes, he noted, artists have their favorite hues and are as reluctant as manufacturers to acknowledge the problem and make changes in their habits.

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