



CYTEC LABORATORY REPORT

June 20,2005

Subject: UV testing on Conoptic doming materials

Objective: To determine the QUV weatherometer comparison of DM-1000 to DM-1320. The QUV weatherometer exposes cured urethane plaques to UV light, temperature and humidity cycles. Conoptic DM-1320 is an established industry standard with over 15 years of outdoor use in the automotive, recreation, appliance and related industries.

Data: The results of this procedure will be measured in physical degradation of the material and increase in yellowing following ASTM D1925 and recorded as change in APHA yellow color.

Equipment: Q-U-V Accelerated Weathering Tester, Lamps (UVA-340 or UVB-313), Specimen mounting plates, De-ionized water, Sample(s) to be tested, Control sample(s)
Hunterlab Colorquest Spectrophotometer

Procedure:

- Cure test specimens according to the data sheet
- Cut specimens into 3" x 6" x 0.5"
- Etch the specimen number onto each specimen
- Measure the YI D1925 yellow of each specimen as a base line standard
- Setup QUV tester according to test procedure
- Attach specimen to mounting plate and place in tester.
- Follow test procedure
- At the end of each week check the specimen for polymer degradation
- At the end of the desired time remove the specimens and measure the YI D1925 yellow value
- Record all data

Results:

Product	YI D1925 color before UV exposure	YI D1925 color after UV exposure	Appearance
DM-1000	4.41	6.99	Transparent
DM-1320	5.21	6.32	Transparent

Conclusion:

DM-1000, after a demanding 3000 hours exposure, showed relatively little color change as compared to the DM-1320. Neither DM-1000 nor DM-1320 showed any apparent physical degradation at the end of this exposure.