BASIC CONCEPTS INC
Justrite Safety Group

High-Strength Coatings Life Expectancy
BCI SC-3900 and CR-3000

The following information has been collected from multiple industry leading experts in an effort to present the most accurate and realistic estimate of the life expectancy of SC-3900 and CR-3000 high strength coatings applied by BCI.

Spray applied elastomeric coatings like BCI's SC-3900 and CR-3000 were first developed in 1988. Since this time there have been numerous test, both practical and theoretical in nature that can be used to indicate long-term performance. This data includes accelerated weatherometer testing, salt spray testing, thermal aging, and polymer morphology testing. In addition to the results of these tests it is important to consider that the service environment, actual application, corrosiveness, abuse level, and film thickness (DFT) will have a bearing on the estimated life span.

The most common testing with regard to accelerated exposure is weatherometer testing. During developmental work on BCI coating system technology, several systems were exposed to ASTM G 53. The number of hours of exposure during this test can be extrapolated into years of outdoor service. In these tests, BCI systems were exposed to a total of 3800 hours, using the UVB-313 bulbs. After this exposure, the samples were re-tested and compared to the original physical property data. The systems tested showed an 80% retention in their physical properties compared to their original properties. While the surface of the elastomer did show discoloration (yellowing), this was only at a surface level and did not affect the integrity of the system

An additional test, commonly referred to a Salt Spray Testing, ASTM B 117 has also been conducted. The panels coated with BCI systems were placed in the salt fog cabinet and exposed to the salt environment, 50°C, for a period of 3000 hours. The panels were removed and inspected for corrosion. The results showed that the BCI systems provided excellent performance after the 3000-hour exposure when compared to comparable polyurethane and epoxy coating samples.

The life expectancy of a BCI spray applied elastomer coating system can be determined by extrapolating the number of hours of exposure to replicate years of outdoor service. The results indicate that every 3000 hours of thermal aging is equal to a 20-year life span. Evaluating the coating for "X" hours, or until there is 50% loss in elastomer physical properties or other failure shows that BCI coating systems have a conservative life expectancy of 75+ years.

For further information call 800-285-4203 or visit us online at basicconcepts.com