

“Accelerated Testing” – Book now available in English....

Ulrich Schulz: “Accelerated Testing – Nature and Artificial Weathering in the Coatings Industry”, is aimed at all those involved or interested in creating, producing, applying, and testing modern high quality coatings for outdoor use.

Coatings are exposed to a great many severe natural stresses that cause gradual deterioration of the properties which are responsible for the coatings’ very quality. Nevertheless, buyers expect coated products to remain in an as-new condition – which is predominantly characterised by highly attractive appearance and intact for as long as possible. This calls for coatings of high weatherability and long service life. **In this book accelerated testing means the method to test the coating quality by simulation of the destructive action of the natural stress by weathering.**

Test engineers shoulder much responsibility because not only must the test results form the basis for reliable predictions, but they must also be obtained economically and as quickly as possible. These results are the dominant factor in any decision to take a new coating creation in series production.

Accelerated testing has become an indispensable tool in the paint and coating chemistry as a means of avoiding nasty surprises by coating in normal use. Other methods of predicting service life are still too unreliable, given the extent of current weathering knowledge. Modern-day high-quality coatings are highly complex systems which contain numerous essential additives. Not surprisingly, coating chemistry is therefore, sometimes jokingly likened to alchemy. But natural weathering, in all its random manifestations of different impact, is equally complex.

Words alone cannot describe how best to simulate the time-like interaction of such a complex system in laboratory. There is more to successful simulation than applying standardized test method, or switching on a fully controlled weathering device which has been marketed as an all-rounder. It takes know-how, experience, and skill. This book will help such abilities to be acquired.

The culmination of decades of experience in the development and performance of accelerated testing methods, it will help those engaged in coating testing to successfully introduce and implement accelerated testing. It will help them not only to critically assess and identify the weaknesses of accelerated testing methods but also to nimbly sidestep the likely errors and have confidence in the test results.

Content:

- 1 Introduction
 - 2 General aspects of accelerated testing
 - 3 Effects of weathering stress
 - 4 Outdoor weathering – natural form of accelerated testing
 - 5 Accelerated outdoor weathering by means of light concentration
 - 6 Artificial weathering – accelerated testing in the laboratory
 - 7 Ageing criteria used in accelerated testing of coatings
 - 8 Standards for accelerated testing
 - 9 References
- Index.

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