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Welcome to the

# FUNDAMENTALS OF WEATHERING

April 23-24, 2025 @ RISE in Borås, Sweden.

**Cromocol**, in collaboration with **RISE** (Research Institutes of Sweden), invites you to join our seminar on weathering durability testing.

Expert instructors from **Atlas Material Testing Technology** will lead the Fundamentals of Weathering (FOW) course, a globally recognized program.

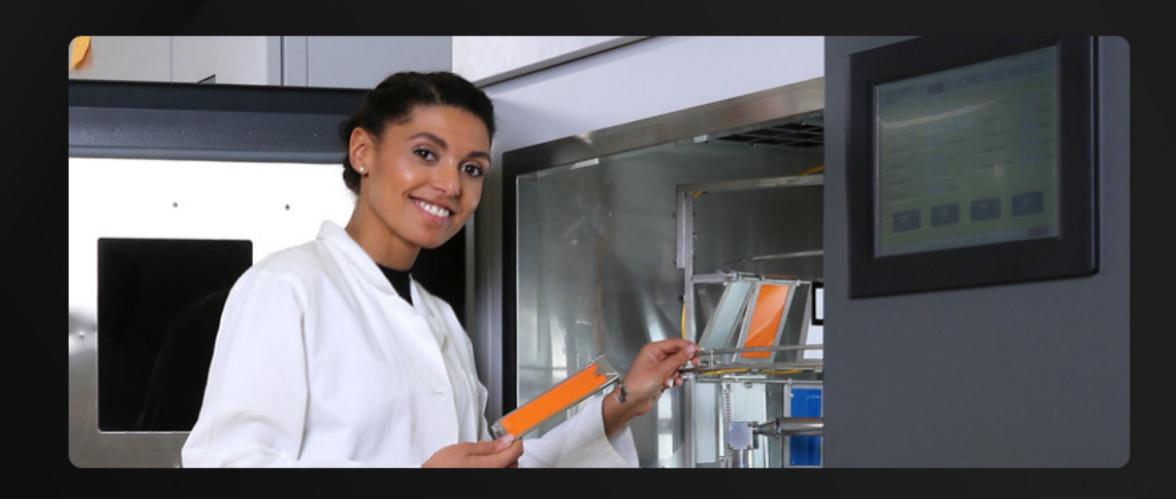
This unique experience also includes a lab tour and practical demonstrations at the weathering and analysis laboratories at RISE, providing you with a comprehensive masterclass in weathering durability testing.

Read more and register now →

### Fundamentals of Weathering I and II

Seminars on the effects of Weather on Material Durability.





### WEATHER - CLIMATE - WEATHERING - AGING

The negative reaction of a material to climatic influences is frequently the reason for unwanted and premature product failure.

Manufacturers, processors, and users must be able to predict the functional suitability of polymeric materials. For product development it is a must to recognize the key factors that cause degradation and – as a consequence to understand how to properly conduct such durability tests.

### CONTENT

The seminars cover weather factors, their effects on polymers, as well as testing techniques to determine the durability of materials exposed to light and weather. In addition, the seminars provide most important tools for test program development, test results evaluation and correlation assessment.

FOW will give special attention to the testing of paints and protective coatings, automotive materials, architectural building products, molded plastics, profiles, wood, packaging, printing, and textile materials.

- Testing Standards
- Acceleration and correlation
- Test methods for basic applications
- Service Life Prediction

## Fundamentals of Weathering I and II

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### **PARTICIPANTS**

The seminars will present the principles of natural and accelerated weathering and are directed to those involved with designing, specifying, evaluating, selling or purchasing products that can be affected by exposure to light or weather. This includes material engineers, product managers, R&D personnel, as well as many other specialists.

### **SPEAKERS**

Course instructors for the seminars are Dr. Florian Feil, senior technical consultant, global manager for client education and manager of standards at Atlas MTT and Mr. Jürgen Parr, weathering specialist at Atlas MTT.





### The agenda of FOW I and II

Choose to participate in I, II or both.

### DAY 1: FOW I

**Wednesday April 23** 

### **WEATHERING FACTORS**

- A description of the primary and secondary factors that affect the degradation of materials
- How to measure the main parameters light and temperature
- Overview of the radiometric quantities
- Synergy of climatic elements
- The worlds climate zones

### **OUTDOOR WEATHERING**

- Influencing factors/variables of outdoor weathering
- Introduction and analysis of the various weathering methods
- Overview of weathering stations throughout the world
- Accelerated outdoor weathering

#### **LAB TOUR**

 Practical demonstrations at the weathering and analysis laboratories at RISE



### LABORATORY WEATHERING

- Requirements to accelerated weathering equipment in the laboratory
- Specific radiation sources and their spectral distribution in comparison to solar radiation
- High-End and Low-End Weathering instruments
- Testing of components

### **TEST METHODS**

- Description of basic test methods
- Overview of Standardization Organizations
- Contents of important weathering standards

### **ACCELERATION OF WEATHERING TESTS**

- Intention and goals of weathering tests
- Evaluation of test results
- Description of correlation and coefficients
- Acceleration and correlation long-term experiences

### The agenda of FOW I and II

Choose to participate in I, II or both.

DAY 2: FOW II

**Thursday April 24** 

# EFFECTS OF WEATHER ON POLYMERIC MATERIALS

- The primary factors of weathering and their impact
- Energy profile of photochemical reactions
- Spectral sensitivity and activation spectrum
- When secondary factors become primary

# DEGRADATION AND STABILIZATION MECHANISMS

- Photooxidation mechanisms of polymers
- Analytical techniques to study the photooxidation of polymers
- Strategies of stabilization



# OPERATION AND VALIDATION OF LABORATORY WEATHERING INSTRUMENTS

- Limits of UV measurements
- Traditional and new reference materials
- Instrument performance control
- Out of specification performance
- Trouble shooting

### CORRELATION AND ACCELERATION

- Procedures to determine the correlation of test results
- Correlation studies and their results
- Understanding acceleration
- · Bene!ts and limits of accelerated testing
- Reliable accelerated testing for service life prediction

# WEATHERING TESTING AND SERVICE LIFE PREDICTION

- Selecting the right standard or test method
- Development of test methods
- Testing strategies
- Extrapolation

### FOW info and registration

Choose to participate in I, II or both.

#### **SEMINAR VENUE**

RISE, Research Institute of Sweden Brinellgatan 4, Borås, Sweden

### **SEMINAR HOURS**

- FOW I: April 23, 2025, 9:00 to about 17:00
- **FOW II:** April 24, 2025, 9:00 to about 16:30

### PARTICIPATION FEE

- **FOW I:** 3500 SEK
- FOW II: 3500 SEK
- FOW I + II: 6500 SEK
- Evening dinner and networking: 650 SEK
- Payment by invoice. The Price includes lunch, fika and documentation.

### LANGUAGE

The seminars will be held in English.



### ACCOMMODATION

If you need accommodation, we recommend: Quality Hotel™ Grand, Rate: 1250 SEK To be sure to get a room, with discounted price, please book asap. **Book here** →

### CONTACT

Questions are answered by Sven-Arne Bylander at Cromocol. +46 (0)33 23 50 00 or <a href="mailto:svenarne@cromocol.se">svenarne@cromocol.se</a>

### REGISTRATION

- Register from the link or QR below.
- The last day for registration is March 14.
- The registration is binding.

#### FOW Registration Form →

