



Introduction to Weathering (W101) Seminar

Wednesday 20th March 2024 at Q-Lab Europe - Bolton Office

| | |
|---------------|--|
| 09:00 - 09:30 | Registration with Coffee & Refreshments |
| 09:30 - 09:40 | Introductions |
| 09:40 – 11:00 | Part 1: Forces of Weathering <ul style="list-style-type: none">• Sunlight: spectral irradiance and material sensitivity• Heat: temperature and thermal cycling• Water: relative humidity, dew, and rainfall |
| 11:00 - 11:15 | Coffee Break |
| 11:15 – 12:00 | Part 2: Outdoor Weathering <ul style="list-style-type: none">• Benchmark outdoor test locations: Florida & Arizona• Natural outdoor weathering testing• Black box, interior automotive material, and behind-glass exposures• Natural sunlight concentrators |
| 12:00 – 13:00 | Lunch |
| 13:00 – 14:15 | Part 3: Accelerated Laboratory Weathering <u>Xenon Arc</u> <ul style="list-style-type: none">• Light delivery: Xenon arc lamps, optical filters, and irradiance control• Environment simulation: black panel, chamber air, humidity, water spray <u>Fluorescent UV Weathering</u> <ul style="list-style-type: none">• Light delivery: fluorescent UV choice of lamps and irradiance control• Environment simulation: black panel, condensation |
| 14:15 - 14:30 | Coffee Break |
| 14:30 - 15:45 | Part 4: Developing Weathering Testing Programs <ul style="list-style-type: none">• Why Test?• Factors affecting correlation between natural and accelerated weathering• Fluorescent UV and xenon-arc comparison• Weathering test program development• Weathering case studies |
| 15:45 - 16:15 | Summary & Conclusions |