



THEMATIC SESSION 1

Antimicrobial performance and durability

27 August 2026 | 09:00-10:30

SUPREME x Triple-A-COAT joint event

Next-Generation Antimicrobial Nano-coatings for High-Traffic Surfaces



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Scope of the panel

- **Topic:** Antimicrobial performance and durability
- **Discussion themes:**
 - How should we evaluate the antimicrobial performance of coatings?
 - What do we consider to be a durable coating?
 - How can we translate laboratory antimicrobial performance into effective real-world implementation?
- Each thematic discussion will begin with an audience poll and conclude with audience questions and comments.



What is the most relevant criterion to evaluate the antimicrobial performance of coatings?

Theme 1: How should we evaluate antimicrobial performance of coatings?

Key considerations:

- Suitability and limitations of current antimicrobial surface testing methods
- Selection of relevant microorganisms, performance criteria and testing conditions
- Transition from screening to application-relevant testing
- Dealing with multi-criterion decision-making
- Selection of appropriate benchmarks, KPIs and thresholds



What should primarily define the service lifetime of an antimicrobial coating?

Theme 2: What do we consider to be a durable coating?

Key considerations:

- **Definition of durability and service lifetime:** maintaining mechanical integrity and functional performance during use
- **Mechanical robustness and durability testing:** resistance to abrasion, touching, cleaning and washing; representative versus accelerated testing
- **Resilience and durability-by-design:** stable integration of antimicrobial functionality, coating uniformity, adhesion/cohesion and potential for repair
- **Durability limits under service conditions:** effects of ageing, weathering, moisture, chemicals, light/UV and thermal cycling
- **Balancing durability with sustainability and end-of-life considerations:** recyclability, removability, biodegradability and system-level evaluation



What is the biggest barrier to translating promising antimicrobial coatings from laboratory success to real-world performance?

Theme 3: How can we translate laboratory antimicrobial performance into effective real-world implementation?

Key considerations:

- Definition of application-specific requirements and conditions of use
- Replication of operational conditions at lab scale and life-time extrapolation from lab-test under combined service conditions
- Validation under representative use conditions and in the field
- Scale-up and reproducibility of coating production, application and performance
- Demonstrating practical added value compared to current solutions