MAWA EVENTS

Address: No. 857, Block A2. Leisure Commerce Square - No 9., 46150 Petaling Jaya, Selangor, Malaysia

Phone: +601116373203 | **Email:** info@mawaevents.net

SURFACE PREPARATION TECHNIQUES

""Mastering the Art of Surface Preparation for Optimal Coating and Protection""

Schedule

Date	Venue	Fees (Face-to-Face)
06 – 10 Apr 2026	Istanbul, Turkey	USD 3495 per delegate

► **Available delivery methods:** Face-to-Face & Online Training

Introduction

Surface preparation is the most crucial step in ensuring the durability and effectiveness of coatings, corrosion protection, and adhesion in industrial and maintenance applications. Whether for metal, concrete, or other surfaces, proper surface preparation techniques play a key role in ensuring that coatings adhere properly and perform optimally.

This 5-day course focuses on the theory and practice of surface preparation techniques, including methods for cleaning, abrasive blasting, mechanical preparation, and chemical treatment. Participants will gain hands-on experience and an understanding of the various surface preparation tools, equipment, and materials used to create ideal conditions for coating applications in different industrial settings.

Objectives

By the end of this course, participants will be able to:

- Understand the principles and importance of surface preparation in industrial maintenance and coatings.
- Master various surface preparation techniques for different substrates (e.g., metals, concrete).
- Select and apply the correct method of surface preparation for specific coating systems.
- Evaluate surface cleanliness and roughness, ensuring optimal conditions for coating adhesion.
- Gain hands-on experience with abrasive blasting, mechanical cleaning, and chemical surface preparation.
- Troubleshoot common issues in surface preparation and avoid defects during coating application.

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Why Attend

- Gain a comprehensive understanding of surface preparation processes and their impact on coating performance.
- Learn the best practices for surface preparation in both industrial and maintenance settings.
- Master various surface preparation methods for different materials and environments.
- Develop skills to select the appropriate surface preparation method based on the type of substrate and coating system.
- Increase your ability to identify and resolve surface preparation issues before coating applications, ensuring long-lasting results.
- Improve efficiency and reduce costs by using the most effective surface preparation methods for each project.

Target Audience

This program is designed for:

- Maintenance and reliability engineers and managers
- Coating applicators and technicians
- Supervisors and project managers involved in industrial coating or protective surface treatments
- Professionals in the oil and gas, construction, and manufacturing industries
- Anyone responsible for the surface preparation process in industrial, commercial, or residential maintenance projects

Individual Benefits

Key competencies that will be developed include:

- In-depth knowledge of surface preparation techniques and their impact on coating performance.
- Proficiency in selecting the right preparation method based on material, environment, and coating requirements.
- Ability to perform hands-on surface preparation tasks using different methods (abrasive blasting, chemical treatments, mechanical methods).
- Skills in evaluating surface cleanliness, roughness, and coating readiness.
- Understanding how to avoid common issues that affect coating adhesion and longevity.

Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Improved quality and consistency of surface preparation for coating and protective applications.
- Reduced coating failures and rework through effective surface preparation practices.
- Enhanced knowledge in selecting and applying surface preparation methods that meet organizational needs.
- Cost savings through optimized resource use and better process efficiency.
- Increased project success by ensuring coatings adhere properly and provide long-lasting protection.

Instructional Methodology

The course follows a blended learning approach combining theory with practice:

- Strategy Briefings – Discussions on the principles of surface preparation, coating adhesion, and the impact of preparation on long-term performance.
- Case Studies – Real-world examples of successful surface preparation techniques and lessons learned from industry applications.
- Workshops – Hands-on sessions focusing on abrasive blasting, mechanical cleaning, and chemical preparation techniques.
- Demonstrations – Practical demonstrations of surface preparation tools and equipment in action.
- Tools – Practical templates and tools for evaluating surface cleanliness, roughness, and readiness for coating.

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Course Outline

Training Hours: 7:30 AM – 3:30 PM Daily Format: 3–4 Learning Modules | Coffee breaks: 09:30 & 11:15 | Lunch Buffet: 01:00 – 02:00

Day 1: Introduction to Surface Preparation Techniques

- Module 1: Surface Preparation Principles and Importance (07:30 – 09:30)
- Overview of surface preparation in industrial and maintenance settings
- The role of surface preparation in coating adhesion and performance
- Factors influencing surface preparation: substrate type, coating system, environment
- Module 2: Methods of Surface Preparation (09:45 – 11:15)
- Abrasive blasting techniques: dry, wet, and bead blasting
- Mechanical cleaning methods: wire brushing, power sanding, grinding
- Chemical treatment techniques: acid etching, phosphating, passivation
- Module 3: Surface Cleanliness and Roughness (11:30 – 01:00)
- Assessing and measuring surface cleanliness: visual inspection, solubility tests
- Roughness measurement and its impact on coating adhesion
- Techniques for improving surface roughness for better coating bonding

Day 2: Abrasive Blasting Techniques and Applications

- Module 1: Introduction to Abrasive Blasting (07:30 – 09:30)
- Types of abrasives used in blasting (sand, grit, shot, etc.)
- Selecting the right abrasive material for specific applications
- Best practices for abrasive blasting to ensure optimal surface preparation
- Module 2: Operating Abrasive Blasting Equipment (09:45 – 11:15)
- Overview of abrasive blasting equipment: air, water, and machine-operated systems
- Maintenance and safety considerations for blasting equipment
- Techniques for achieving the desired surface profile using abrasive blasting
- Module 3: Troubleshooting Blasting Issues (11:30 – 01:00)
- Common problems in abrasive blasting and how to troubleshoot them
- Ensuring consistent results in surface preparation
- Methods to reduce waste and improve the efficiency of abrasive blasting

Day 3: Mechanical Surface Preparation Techniques

- Module 1: Mechanical Cleaning Methods (07:30 – 09:30)
- Techniques for mechanical cleaning: grinding, sanding, and wire brushing
- Selecting the appropriate mechanical cleaning method for different substrates
- When and how to use mechanical methods to supplement other preparation techniques
- Module 2: Surface Preparation for Concrete and Other Substrates (09:45 – 11:15)
- Preparing concrete and masonry surfaces for coating
- Chemical treatments and abrasives for concrete surface preparation
- Techniques for preparing difficult substrates such as fiberglass or composites
- Module 3: Combining Mechanical and Chemical Techniques (11:30 – 01:00)
- The role of combined mechanical and chemical methods in surface preparation
- Techniques for removing contamination and rust from metal surfaces
- How to use mechanical methods to improve chemical treatment effectiveness

Day 4: Chemical Surface Preparation Techniques

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Module 1: Chemical Cleaning and Etching (07:30 – 09:30)

- Overview of chemical cleaning and etching processes
- Selecting the right chemicals for surface preparation
- Safety protocols and environmental considerations in chemical surface preparation
- Module 2: Passivation and Phosphating (09:45 – 11:15)
- The process of passivating metal surfaces to prevent corrosion
- Phosphating as a surface preparation technique for steel and other metals
- Applications and benefits of chemical surface preparation for coatings
- Module 3: Chemical Treatment for Concrete Surfaces (11:30 – 01:00)
- Specialized chemical treatments for concrete and masonry substrates
- Techniques for removing contaminants and improving adhesion for coatings
- Case studies of successful chemical treatments in industrial applications

Day 5: Evaluation, Testing, and Best Practices

- Module 1: Surface Preparation Evaluation Methods (07:30 – 09:30)
- Techniques for evaluating surface cleanliness and roughness
- Tools and instruments used in surface preparation assessment
- Understanding the impact of poor surface preparation on coating performance
- Module 2: Quality Control in Surface Preparation (09:45 – 11:15)
- Implementing quality control measures in surface preparation
- Developing inspection protocols for surface readiness
- Best practices for ensuring consistency and quality in surface preparation
- Module 3: Hands-On Workshop and Certification Review (11:30 – 01:00)
- Practical demonstration of surface preparation techniques
- Review of key learning points from the course
- Preparing for the certification exam and Q&A session

Certification

Upon completing the training course, participants will receive a Certificate of Completion in Surface Preparation Techniques, validating their expertise in preparing surfaces for industrial coating applications.

Why Choose MAWA Events

- **Global Expertise:** More than 17 years of experience in professional training and consulting.
- **Industry-Leading Faculty:** Courses delivered by seasoned professionals with hands-on experience.
- **Practical Insights:** Learn to turn theory into actionable strategies for real-world business impact.
- **Client-Focused Solutions:** Customized programs designed to achieve your organisation’s unique goals.

In-House / Customized Training Interested in running this course for your team? Please contact us:	TEL: **+601116373203**	EMAIL: **info@mawaevents.net**