

TRAINING PROGRAM: AIRCRAFT PAINTING

Target audience

This training is for:

- Painters applying aeronautical paints
- Chemical engineers and process engineers in the aerospace sector
- Anyone wishing to become familiar with Mapaero paint systems

Prerequisites

This training does not require any prior experience or knowledge of paint systems.

Training objectives

Provide basic principles of paint development and manufacturing through the fundamentals of chemistry.

Understand the requirements and specifications of airframe and cabin interior paints according to aircraft and equipment manufacturers.

Obtain application techniques of Mapaero paint systems under the best conditions, focusing on safety and quality, reaching OAM/OEM/MRO requirements.

Best practice in prevention, identification and correction of defects.

Training content

1 - Overview / Introduction on aerospace paints:

- Different types of paints (Structure primer, LOW VOC polyurethane finish, high-temperature resistant paints)
- Paints Chemistry
- Environmental impact and REACH regulation.
- Technical documentation (ICS, AMM, CML, ...) and MAPAERO's qualifications

2 - Structure paints:

Primer and topcoat

- Introduction of P60-A water-soluble primer and F70-A topcoat.
- Application of the primer and topcoat on different parts including: Surface preparation, application process, compliance with the technical and quality requirements of manufacturers.

Direct adhesion topcoat

- Presentation of the F69 direct adhesion, chromate free, water-based topcoat.
- Application of the F69 TUK topcoat on different parts: surface preparation, implementation, compliance with the technical requirements and qualities of the Airbus manufacturers.

3 - MAPAERO's water based cabin paints

Putty / Filler

- Introduction and application of FRM1K, a mono-component fire retardant acrylic water based putty for filling pinholes and correct small defects on cabin interior composite parts.

Primer / Surfacer

- Introduction and application of FR4-45, fast drying waterborne 2-component fire retardant polyurethane Primer / Surfacer for aircraft cabin interior materials.

Standard Topcoats

- Introduction of FR2-55 and FR6-55, water-based topcoats.
- Application of FR2-55 and FR6-55 topcoat with different finishes applied on top of the primer. Alternatively, a direct application on plastic parts including surface preparation, application with process parameters for finish type (smooth / textured), compliance with technical and quality requirements of the manufacturer.

Direct Texture Topcoats

- Introduction of FRC and Di-Tex, water-based topcoats.
- Application of FRC and Di-Tex topcoat with different finishes applied on top of the primer.

Clearcoat

- Introduction and application of FR5-55, two-component water-based polyurethane clear coat for aircraft interiors.

4 - MAPAERO's solvent based cabin paint range

Putty/Filler

- Introduction and application of M61-C, fire retardant clear polyurethane putty varnish, used for composite and wood substrate preparation

Primer/Surfacer

- Introduction and application of FRS30, solvent borne 2-component fire retardant polyurethane Primer / Surfacer for aircraft cabin interior materials.

Standard Topcoat

- Introduction of FRS40, solvent based topcoats.
- Application of FRS40 topcoat with different finishes applied on top of the primer. Alternatively, a direct application on plastic including: surface preparation, application with process parameters for finish type (smooth/textured), compliance with technical and quality requirements of the manufacturer.

Clearcoat

- Introduction and application of 1500 FR & 1500 HD, solvent borne 2-component fire retardant polyurethane Clearcoat for aircraft cabin interior materials.

5 - Special Coatings

- Introduction and application of A1000AD, fire retardant solvent based polyurethane antiskid topcoat for protection of aircraft interiors.
- Presentation and application of FR2-55 FLEX, fast Drying Waterborne 2-component fire retardant polyurethane topcoat for aircraft cabin interior flexible materials such as leather and foams. Introduction of FRS40 FLEX.

6 - Metal part refurbishment on cabin

- Introduction of aluminum repair system (F69 / FRS40 / 1500FR) and application

7 - Utilization and parameter of the application tools (gun, cabin ...).

8 - Methodology of application.

9 - Checks list after paint application. (Polymerization test, thickness measurement, gloss etc.)

10 - Application defects: causes, prevention, solutions.

The previously detailed content may vary to feet customer's needs.

Teaching methods

The training will be delivered through theoretical presentations, demonstrations and application practice of the different paints held either at MAPAERO or at the customer facility.

Evaluation of learning outcomes

Each participant will be given a questionnaire to assess the achievement of the objectives and the adequacy of the means implemented. An MCQ-type test will also be completed by each participant to assess the understanding of the training provided.

Trainers

The training is provided by Chemical Engineers with many years of experience in the field of aeronautical paints.