

AIPS
Airbus Process Specification

Cleaning of Aircraft Cockpits and Cabin Interiors

Published and distributed by
AIRBUS S.A.S.
ENGINEERING DIRECTORATE
31707 BLAGNAC Cedex
FRANCE

Contents

- 1 Scope
- 2 Normative references
- 3 Applicability, limitations and definitions
- 4 Requirements to be met by a process
- 5 Process qualification
- 6 Process work and quality control instructions
- 7 Health and Safety

1 Scope

The purpose of this specification is to give design and quality requirements to manufacturers or airlines, which are required for cleaning of aircraft cockpits and cabin interior. Although the essential requirements of a process will be described in detail, this specification does not give complete in-house operating instructions, these shall be given in the manufacturers supporting work instructions. This specification shall not be used as an inspection document unless parts or assemblies have been treated to this specification. Unless specified on or through the drawings, the latest issue of this AIPS shall be used.

2 Normative references

ABD 0043	Materials – consumable
P-D-680	Dry cleaning and degreasing solvent
TT-M-261	Methyl Ethyl Ketone, Technical
AMS 1535	Cleaner for Plastic Transparencies
AMS 1550	Cleaner for Interior Materials of Aircraft, Biodegradable, Water-Base
AMS 1630	Carpet Cleaner, Shampoo Type
TL 25/5091/83	Airbus Technical Specification, Carpet-frame specification

3 Applicability, limitations and definitions

3.1 Applicability

This process is applicable when invoked by the drawing directly or through another document for the purpose given in the scope.

3.2 Limitations

Only specified materials, used in accordance with manufacturer's instructions, unless otherwise stated, shall be used.

The water and equipment that will be used for these procedures must be clean and contain no particles that could damage the surfaces.

Caution: Rubbing acrylic glass surfaces with a dry cloth causes scratches and builds up an electrostatic charge, which attracts dust particles.

3.3 Definitions

Not applicable for this AIPS.

4 Requirements to be met by a process

4.1 Design requirements

The cleaned surfaces shall be free from dirt, dust, particles, fingerprints, stains or other contamination. The surface shall not be changed or damaged by the cleaning procedure. The cleaned material shall not lose their fire retardant quality by the cleaning act.

4.2 Quality requirements

The quality assurance authority shall inspect the cleaned surface visually to demonstrate that the design requirements are met. They shall ensure that only specified materials have been used.

4.3 Key Characteristic

Key Characteristics acc. to EN9103 are defined by responsible engineering based on a risk analysis for parts manufactured by this process. Key characteristics shall be defined on product level and if necessary also on process level.

They shall be subject to variation control by production organization according to EN9103.

Key Characteristics do not relieve the production organization from meeting all engineering requirements defined in this document.

Table 1: Key Characteristic cleaning of aircraft cockpits and cabin interiors

Product Key Characteristic			Process Key Characteristic		
No.	Designation	Requirement/ Limit	Sub.- No.	Designation	Requirement/ Limit
1	Quality of cleaned surfaces	Design requirements (see chapt. 4.1)	1.1	Cleaning procedure for coloured plastic and painted surfaces	Cleaning of coloured plastic and painted surface (see § 6.3.1)
			1.2	Cleaning procedure for transparent plastic surfaces	Cleaning of transparent plastic surfaces (see § 6.3.2)
			1.3	Cleaning procedure for monitors and display screens	Cleaning of monitors and display screens (see § 6.3.3)
			1.4	Cleaning procedure for mirrors	Cleaning of mirrors (see chapter 6.3.4)
			1.5	Cleaning procedure for carpets	Cleaning of carpets (see § 6.3.5)
			1.6	Cleaning procedure for seat covers and curtains	Cleaning of seat covers and curtains (see § 6.3.6)
			1.7	Cleaning procedure for the PVC floor covering	Cleaning of the PVC floor covering (see § 6.3.7)
			1.8	Cleaning procedure for synthetic leather	Cleaning of synthetic leather (see § 6.3.8)
			1.9	Cleaning procedure for aluminium and stainless steel components	Cleaning of the aluminium and stainless steel components (see § 6.3.9)

5 Process qualification

Not applicable for this AIPS.

6 Process work and quality control instructions

6.1 Equipment required

The following equipment shall be used:

- chamois leather
- clean, dust-free cloth
- masking paper
- soft fibre brush
- medium fibre brush
- stiff fibre brush
- paper towels
- sponge
- vacuum cleaner
- gloves
- surgical cotton wadding
- sterile gauze pads
- blunt, non-metallic scraper

6.2 Material required

The following materials shall be used in accordance with the manufacturer instructions. They are items of the consumable material list (CML) which is established according to the ABD 0043.

Table 2: Material required

Material	Specification or product name	CML item-number
Plastic cleaner	Antistatischer Kunststoffreiniger + Pflege, Burnus	-
Dry cleaning solvent (varsol/white spirit)	P-D-680 Type I or II	11-002
Methyl-ethyl-ketone	TT-M-261	11-003
Cleaning solvent	Citra safe	11-016
Interior general plastic cleaner	AMS 1550	11-017
Carpet and fabric cleaner	AMS 1630	11-018
Cabin window cleaner	AMS 1535	11-019
Visual display unit, anti-static cleaner	AlglaS	11-020
	Prophot	11-020A

6.3 Procedure

Clean gloves shall be worn to prevent contamination of the surface and to protect the personnel. The cleaning agent shall be poured onto the pad, chamois leather or sponge, never immersed in the cleaning agent. Brushes may be dipped into the cleaning agent, which shall be renewed frequently.

6.3.1 Cleaning of coloured plastic and painted surfaces

Electrical outlets shall be suitably masked to prevent ingress of the cleaning agent. Any loose dirt shall be removed from the surface with a soft fibre brush. The diluted cleaning agent 11-017 shall be applied to the dirty surface with a damp sponge. If necessary allow the damp sponge to remain on the surface for 1 or 2 minutes. After cleaning wash the surface with clean, lint free cloth. Note: if stain is still evident the cleaning procedure shall be repeated until the stain is removed. The masking paper shall be removed from the electrical outlets.

6.3.2 Cleaning of the transparent plastic surfaces

Electrical outlets shall be suitably masked to prevent ingress of the cleaning agent. The surface shall be cleaned with a lint-free cloth, sponge or chamois leather and warm water. Make sure that there is no abrasive material on the surface. Water shall be used sparingly. The cleaning agent 11-017 shall be applied to the surface with a damp sponge or a damp chamois leather. Wash the surface with a damp sponge or damp chamois leather and warm water. If further cleaning is required the special material "Plastic cleaner" shall be applied to the surface with a clean lint-free cloth. Wash the cleaned surface with warm clean water using a dampened sponge. Water shall be used sparingly. The surface shall be dried with a chamois leather. Inspect the surface visually to ensure cleanliness. The masking paper shall be removed from electrical outlets.

6.3.3 Cleaning of monitors and the display screens

For a multi-layer-anti-reflection coating a clean surface has a reflection coefficient two or three times better than a surface with finger marks, therefore it is essential that clean gloves are worn during the cleaning process.

Remove dust using a soft brush, used for cleaning photographic/optical components. The brush shall be cleaned before use and be free from dust, particles or other foreign particles. The optical elements shall be cleaned using a circular scanning movement. Make sure that no dust or any other particles (abrasive, hair etc.) are left.

A cotton wad or gauze pad shall be moistened with cleaning agent 11-020 and the surface wiped in one pass. This procedure shall be repeated with a new pad or gauze until all marks are removed.

After the final cleaning, inspect the surface for the absence of reflections, coloured rings, fingerprints, scratches or other damage. Particular attention shall be taken in respect of corners, dial circumference and keys.

Finally the surface shall be wiped with a dry pad or gauze. The pad or gauze shall be replaced after each pass.

6.3.4 Cleaning of mirrors

Wash the surface with a dampened sponge and clean warm water. No abrasive particles shall remain on the surface. Apply cleaning agent 11-019 to the surface with a damp lint-free cloth or sponge. Wash the surface with clean warm water and a damp sponge. Dry the surface with a chamois leather. The surface shall be free of fingerprints or coloured rings. The cleaning process shall be repeated if the surface is visually unacceptable.

6.3.5 Cleaning of carpets

Note: Cautio, TL 25/509/83 divides carpets into:

Type I: A disposable quality, not normally subject of multiple cleaning.

Type II: A quality or carpet with a multi-cleaning capacity.

6.3.5.1 Cleaning of carpet type II

6.3.5.1.1 Stain removal

Stains should be removed as soon as possible. Many stains can be removed when fresh become difficult or impossible to remove after ageing.

The stained area shall be moistened with clear cold or lukewarm water using a sponge.

It is necessary to soften stain area by gently working the carpet pile with a blunt, non-metallic scraper and dry the area of the stain with paper towels.

Carefully apply the according to manufactured advice diluted, foamed cleaning agent 11-018 to the stain area with a medium fibre brush. Note: vigorous scrubbing with brushes can damage the carpet.

If stains are still evident, the cleaning act shall be repeated with the cleaning agent.

Dry the area with paper towels.

The stain area shall be vacuum cleaned. Note: Make sure that the aircraft electrical network has been energised.

Brush the area with a soft fibre to straighten and lift pile.

6.3.5.1.2 Dirt removal

The area shall be cleaned with a vacuum cleaner. Note: Make sure that the aircraft electrical network has been energised.

A medium fibre brush shall be used to lift the carpet pile.

6.3.5.1.3 Extensive cleaning

For extensive cleaning a shampooing machine and the cleaning agent 11-018 shall be used.

After the cleaning act the carpet shall be clean, dry and free of any cleaning agent residues.

6.3.5.2 Cleaning the carpet type I

6.3.5.2.1 Stain removal

See § 6.3.5.1.1

6.3.5.2.2 Dirt removal

See § 6.3.5.1.2

6.3.5.2.3 Extensive cleaning

Not allowed!

6.3.6 Cleaning of seat covers and the curtains

6.3.6.1 Stain removal

Note: fabrics are fire-retardant treated, therefore only specified cleaning materials shall be used. Cleaning in accordance with the following instructions will not affect fire-retardant properties of fabrics. In event that the following instructions conflict with instructions given by fabric manufacturers the latter shall apply.

Moisten the area of the stain with the according to the manufacturers advice diluted, foamed cleaning agent 11-018 using a damp sponge or a damp cloth.

The wet area shall be dried with paper towels.

6.3.6.2 Dry clean

The area of the stain shall be dry cleaned with a foamed solution of the cleaning agents 11-018 and 11-002.

6.3.6.3 Extensive cleaning

Curtains can be extensively cleaned by machine washing with suitable cleaning agents.

6.3.7 Cleaning of the PVC floor covering

Remove the loose dirt from the surface with a vacuum cleaner. Note: Make sure that the aircraft electrical network has been energised.

Apply the cleaning agent 11-017 to the surface with a stiff fibre brush. Note: linear cleaning, in direction of pattern, improves cleaning effectiveness.

The surface shall be rinsed with a clean cloth and warm water.

If necessary the cleaning act shall be repeated.

Dry the surface with a cloth.

6.3.8 Cleaning of synthetic leather

6.3.8.1 Removal of oil based stains

Loose dirt in stain area shall be removed by wiping lightly with a clean cloth, dampened with the cleaning agent 11-003. Note: do not rub textured or perforated surfaces. Rubbing forces dirt into surface.

Diluted detergent 11-017 shall be applied to stained area using damp sponge. Note: when cleaning textured surfaces, remove stain from recessed areas by lightly scrubbing with soft fibre brush.

Rinse area with a sponge and clear water. Note: stain is still evident, repeat above steps until stain is removed.

Wipe the surface dry with a clean cloth.

6.3.8.2 Removal of water-based stains

Apply diluted detergents 11-017 to stained area using damp sponge. Note: when cleaning textured surface, remove stain from recessed areas by lightly scrubbing with soft fibre brush.

Rinse area with sponge and clear water. Note: if stain is still evident, repeat above steps until stain is removed. Make certain that all traces of detergent are removed from the surface (visual check)..

Wipe the surface dry with a clean cloth.

6.3.9 Cleaning of the aluminium and stainless steel components

Note: do not use polishes or abrasives on decorative aluminium surfaces.

Electrical outlets shall be suitably masked to prevent ingress of the cleaning agent.

Diluted detergent 11-016 shall be applied to the surface using a damp sponge or a damp cloth.

Rinse the surface with clean water and a damp sponge.

The surface shall be dried with clean cloth.

If necessary repeat the cleaning act until the surface has an uniform appearance.

The masking paper shall be removed from the electrical outlets.

6.4 Quality control instructions

The quality is controlled by the performance of visual inspections to the extent deemed to be necessary by the Quality Assurance Department. There shall be no dirt, dust, particles, stains, fingerprints, reflections, coloured rings or other contamination on the different cleaned surfaces. No degradation of the cleaned surface shall be visible to the naked eye.

7 Health and Safety

Use solvents / cleaning agents and other special materials only with a good flow of air through the work area. These materials can be poisonous, flammable and / or skin irritants. The manufacturers material safety data sheet is applicable.

This specification does not necessarily detail at the precautions necessary to meet the requirements of health and safety. It is the responsibility of the user of this specification to consult and establish appropriate health and safety precautions and that only trained personnel should operate the method.

Uncontrolled copy when printed (: PAREDES LORENZO, JOS MARA (EXTERNAL), 10/05/2018)

RECORD OF REVISIONS

Issue	Clause modified	Description of modification
1 11/95		New standard.
2 11/00	4.3	
3 05/10	4.3	KC implementation Standard has been editorial revised.