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AIRCRAFT LACQUER FINISHING SYSTEMS

SPECIFICATION

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Federal Standard 595a	Colours
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Australian Standard 1216.1 - 1984, Part 1	Classification and Class Labels for Dangerous Goods
DEF(AUST) 206E	Handbook of Liquid Fuels, Lubricants and Allied Products. Turbine fuel, Aviation (Kerosene Type) Specification- NATO CODE No F-35 AVTUR
DEF(AUST) 1000	ADF Packaging
MIL-C-22750	Exterior Finishing Schemes (Cold Curing Epoxide Type)
MIL-L-19537C	Lacquer, Acrylic Nitro-cellulose, Gloss (for aircraft surfaces)
MIL-L-19538C	Lacquer: Acrylic Nitrocellulose, Camouflage (For Aircraft Use)
MIL-L-23699	Lubricating Oil, Aircraft Turbine Engines, Synthetic Base
MIL-L-81352	Lacquer, Acrylic (for Naval Weapons Systems).
MIL-P-23377D	Primer, Epoxy Polyamide, Chemical and Solvent Resistant
MIL- T -19544	Thinner, Acrylic Nitro-cellulose Lacquer.
MIL-T-81772	Thinner, Aircraft Coating.
TI-L-20	Lacquer Camouflage
TI-L-32, Lacquer	Cellulose Nitrate, Gloss
TI-T-266	Thinner Dope and Lacquer, Cellulose Nitrate

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AUSTRALIAN DEFENCE STANDARD
DEF(AUST) 9002
AIRCRAFT FINISHING SYSTEMS
SPECIFICATION

Specific inquiries regarding the application of this specification to Requests for Tender or contracts should be addressed to the Ordering Authority named in the Request for Tender, or to the Quality Assurance Authority named in the contract, as appropriate.

WARNING

This specification may call for the use of substances and test procedures that may be injurious to health if adequate precautions are not taken. It refers to technical suitability only and in no way absolves the supplier or user from statutory obligations relating to health and safety at any stage of manufacture or use.

1 INTRODUCTION

1.1 **Precedence.** In the event of a conflict between the requirements of this specification and the references cited herein, the requirements of this specification take precedence. Nothing in this specification however, overrides applicable laws and regulations, unless a specific exemption has been obtained.

2 SCOPE

2.1 This specification covers the technical requirements of primers, and finishing coats procured for use in the ADF as paints for aircraft surfaces, both internal and external.

2.2 Materials supplied in accordance with this specification will be classified as:

2.2.1 Type A, Lacquer nitro-cellulose system;

2.2.2 Type B, Lacquer acrylic nitro-cellulose system;

2.2.3 Type C, Epoxy polyamide system; or

2.2.4 Type D, Lacquer acrylic resin system.

3 ABBREVIATIONS

3.1 Nil.

4 DEFINITIONS

4.1 **Procurement Authority.** A Procurement Authority (also referred to as the Project Manager or Sponsor for the purposes of this instruction) is an organisation, which initiates a procurement requirement on behalf of end users. The Procurement Authority would normally be the manager of an item of supply (Item Manager).

4.2 **Quality Assurance Authority.** The Commonwealth quality assurance authority shall be the Directorate of Quality Assurance – Air, or his nominated representatives.

4.3 **Sponsoring Authority.** The Sponsoring Authority for this specification shall be OIC AMPTS (Aircraft Maintenance Processes, Technologies and Standards).

5 REQUIREMENTS

5.1 **Compliance.** Materials of finishing systems submitted to the Procurement Authority for compliance to this specification shall meet all the requirements of this specification unless varied by the Sponsoring Authority. In addition, all components of the system must meet the requirements of this specification. Where the requirements of this specification conflict with specifications quoted herein, then this specification shall be the over-riding document. All tests detailed herein shall be performed at a NATA approved laboratory. To ensure compatibility of materials, the primers, finishes and associated thinners for use in a particular system shall be procured from the one manufacturer. Failure to provide any component of the particular system will automatically disqualify the manufacturers system.

5.2 **Compliance Samples.** The requirements for compliance samples detailed hereunder are applicable to all systems, and are additional to the specific supplementary requirements for each of types A, B, C and D. To prove compliance, applicants are to submit the following to AESSO ACSAH1, RAAF Williams or his nominated representative:

5.2.1 NATA evidence that the materials to be supplied under this specification comply with paragraphs 1 to 9.1 inclusive, and

5.2.2 NATA evidence that, when tested in accordance with AS1580.601.1, a sprayed panel, prepared and painted in accordance with paragraph 5.3, meets the relevant colour standard for the colour, gloss level and paint scheme listed below:

5.2.3 Type A. TT-L-32

5.2.3.1	Aluminium	(gloss)	FED STD 595B-17178
5.2.3.2	White	(gloss)	FED STD 595B-17875
5.2.3.3	Olive Drab	(gloss)	BS 381C-298
5.2.3.4	Red	(gloss)	BS 381C-538

5.2.4 Type B. MIL-L-19537

5.2.4.1	Aluminium	(gloss)	FED STD 595B-17178
5.2.4.2	White	(gloss)	FED SID 595B-17875
5.2.4.3	Olive Drab	(gloss)	BS 381C-298

5.2.5 Type B. MIL-L-I9538

5.2.5.1	Olive Drab	(matt)	BS 38 IC-298
5.2.5.2	Extra Dark, Sea Grey	(matt)	BS 38IC-640
5.2.5.3	Olive Drab	(semi-gloss)	BS 381C-298
5.2.5.4	Extra Dark, Sea Grey	(semi-gloss)	BS 38IC-640

5.2.6 Type C. MIL-C-22750E

5.2.6.1	White	(gloss)	FED STD 595B-I7875
5.2.6.2	Black	(matt)	FED STD 595B-37038
5.2.6.3	Gray	(matt)	FED STD 595B-3625 1

5.2.7 Type D. MIL-81352

5.2.7.1	White	(gloss)	FED STD 595B-I7875
5.2.7.2	Tan	(matt)	FED STD 595B-30219
5.2.7.3	Green	(matt)	FED STD 595B-34102

5.3 **Colour.** The colour of the material system shall be tested using AS 1580.601.1 with the exception that the first coat shall be one of the appropriate primers. It shall conform to the colour specified in the applicable documents.

5.4 **Keeping Qualities.** The keeping qualities of the materials shall be such that when stored in their original sealed containers the materials shall retain the properties specified herein for not less than twelve months in a temperate climate and not less than six months in a tropical climate.

5.5 **Degree of Gloss.** Unless otherwise specified, the common terms relating to degrees of gloss shall meet the requirements given below when tested in accordance with AS 1580.602.2 or ASTM D 523. (The units of gloss listed below relate to 100 being the Primary Reference standard and zero being the Zero Reference standard as calibrated on the instrument for gloss measurement, with intermediate numbers being percentages of that range.):

5.5.1.1	Full Gloss	85 to 100
5.5.1.2	Semi-gloss	15 to 45
5.5.1.3	Low-gloss	7 to 15
5.5.1.4	Matt	0 to 5

5.6 **Condition.** All materials shall be in such a condition that manual stirring will produce a uniform product suitable for spraying. The spraying consistency may be obtained by the addition of not more than ninety percent (90%) by volume of the appropriate thinner unless otherwise specified. All materials shall be tested using AS 1580.211.2.

5.7 **Freedom from Objectionable Ingredients.** All material shall be free from ingredients that may cause injury and discomfort to operators during or after application when used for its intended purposes.

5.8 **Thinning Properties.** The products shall be capable of being readily thinned in the specified proportions with the designated thinner without showing precipitation or other defects when tested in accordance with AS 1580.280.1.

5.9 **Thinners.** The thinner in all cases shall be that recommended by the manufacturer of the primers and finishes and approved by the Quality Assurance Authority.

6 SUPPLEMENTARY REQUIREMENTS OF TYPE A SYSTEM ONLY

6.1 **Description.** The scheme shall consist of a single pack zinc chromate pigmented etching primer and a single pack finish. The finish will be of the "nitro-cellulose" type. The products shall be so designated so that under normal spraying conditions the total dry film thickness of the system shall not be less than 40 microns and no more than 50 microns.

6.2 Application Properties

6.2.1 **Spraying Properties.** The products shall show good spraying and lapping qualities and freedom from orange peel, streaking or any other defect when tested in accordance with annex A, paragraph 1.1.

6.2.2 **Bridging Properties.** The scheme shall show good bridging properties over lapped joints. There shall be no signs of cracking or shrinkage when tested in accordance with annex A, paragraph 1.2.

6.2.3 **Drying Time.** The primer shall be dry and suitable for application of the finish not more than four hours after its application. The finish shall become hard dry in not more than a subsequent five hours when tested in accordance with annex A, paragraph 4.1.

6.3 **Flexibility, Hardness and Adhesion.** Requirements will be as for annex A, paragraph 6.1.

6.3.1 **Bend Test.** A dry film of primer and finish when submitted to the bend test at 0°C using a 9 mm mandrel, shall show no cracking and shall remain firmly adhered to the metal. There shall be no intercoat cracking nor detachment of finish from primer. The test shall be conducted in accordance with annex A, paragraph 7.1.

6.3.2 **Scratch Resistance.** A dry film of primer and finish shall withstand a scratch test load of 1000 gm without penetration to the metal. The scratch shall be free from jagged edges of width greater than 1 mm when tested in accordance with annex A, paragraph 8.1.

6.3.3 **Scratch Resistance after Water Immersion.** A dry film primer and finish shall withstand a scratch test load of 600 gm without penetration to the metal. The scratch shall be free from jagged edges of width greater than 1 mm when tested in accordance with annex A, paragraph 8.2.

6.3.4 **Intercoat Adhesion.** When a dry film of primer and finish is heated in an oven maintained at 120 ± 2°C for 4 days, then allowed to cool for 24 hours, wet scuffed with No. 400 abrasive paper and coated with finish, the film shall meet the requirements specified in paragraph 6.3.1 and 6.3.2 with the addition that in the Bend Test there shall be no loss of adhesion between the two finishing coats.

6.3.5 **Resistance to Salt Water.** A dry film of primer and finish shall show no colour change, cracking, flaking, blistering or rusting when tested in accordance with annex A, paragraph 9.1.

6.3.6 **Resistance to Organic Solvents.** A dry film of primer and finish examined immediately after withdrawal from the solvents shall show no sign of removal, nor shall the solvent be discoloured due to extractives from the paint film when tested in accordance with annex A, paragraph 10.1. A slight gumminess on the panel just above the solvent level shall be disregarded. When examined one hour after removal from the solvent the film shall show the original condition and appearance, and shall withstand a Bend Test using a 13 mm mandrel without any signs of detachment or damage.

6.3.7 **Resistance to Synthetic Lubricating Oils.** A dry film of primer and finish examined immediately after withdrawal from the lubricating oil shall show no blistering, film softening or other failure. The oils shall not be discoloured due to extractives from the paint film. A slight gumminess on the panel just above the oil level shall be disregarded. When examined one hour after withdrawal from the oil, the film shall show the original condition and appearance and shall withstand a Bend Test using a 13 mm mandrel without any signs of detachment or damage. The test shall be made in accordance with annex A, paragraph 11.1.

6.3.8 **Resistance to Hot Kerosene.** A dry film of primer and finish examined immediately after withdrawal from the kerosene shall show no blistering, film softening or other film failure. A slight gumminess just above the kerosene level shall be disregarded. When examined one hour after withdrawal from the kerosene the film shall show the original condition and appearance and shall withstand a Bend Test using a 13 mm mandrel without showing signs of detachment or damage. The test shall be made in accordance with annex A, paragraph 12.1.

6.3.9 **Resistance to Outdoor Weathering.** The resistance to outdoor weathering of a film of primer and finish shall be such that when tested in accordance with annex A, paragraph 13.1, both halves of the test panel will comply with the following requirements:

6.3.9.1 there shall be no erosion, cracking, flaking or blistering; and

6.3.9.2 the rate of chalking, discolouration and/or colour change shall not fall below seven (7) when tested in accordance with AS 1580.481.1.

7 SUPPLEMENTARY REQUIREMENTS OF TYPE B SYSTEM ONLY (Lacquer Acrylic Nitro-Cellulose)

7.1 **Description.** The system is specially designed for resistance to synthetic lubricating oils, and except as varied by paragraph 5.1 each component of the system will conform to the requirements as detailed in the following specifications:

7.1.1 Epoxy Primer:

7.1.1.1 MIL-P-23377D, paragraphs 3 and 4.

7.1.2 Finishing Coat:

7.1.2.1 MIL-L-19537C, Gloss, paragraphs 3 and 4; and

7.1.2.2 MIL-L-19538C, Matt and Semi-gloss, paragraphs 3 and 4.

7.2 **Thinners.** The thinners in all cases shall be that recommended by the manufacturer of the primers and finishes and approved by the Quality Assurance authority. The thinners shall conform to the following specifications.

Type B Material	Thinner
MIL-P-23377	MIL- T -81772
MIL-L-19537	MIL-T-19544
MIL-L-19538	MIL-T-19544

8 SUPPLEMENTARY REQUIREMENTS OF TYPE C (Epoxy Polyamide System Only).

8.1 **Description.** The system will comprise of the three components detailed below:

8.1.1 Epoxy Primer MIL-P-23377D,

8.1.2 a pigmented cold curing polyamide epoxide undercoat, and

8.1.3 a pigmented cold curing polyamide epoxide finishing coat.

8.2 The components will conform to all the requirements of MIL-C-22750E with the following exceptions:

8.2.1 as varied by paragraphs 5.1 of this specification, and

8.2.2 type Approval, Routine Inspection and Preparation for Delivery are as per this specification (see section 12).

9 SUPPLEMENTARY REQUIREMENTS OF TYPE D (Lacquer Acrylic Resin system only)

9.1 **Description.** The system is designed as a general purpose, exterior protective coating for metal surfaces and is specifically formulated for resistance to diester lubricating oil and heat. Except as varied by paragraph 5.1 each appropriate component of the system will conform to the requirements as detailed in the following specifications:

9.1.1 MIL-P-23377D, Epoxy Primer, paragraph 4.6; and

9.1.2 MIL-L-81352A, Lacquer Finishing, paragraph 4.3.

10 QUALITY ASSURANCE PROVISIONS

10.1 The contractor shall maintain effective control of the quality of supplies and/or services (including sub-contracts), and perform all examinations and tests stated in the contract to demonstrate conformance of supplies and/or services to the technical requirements of the contract. The contractor shall offer only supplies and/or services that conform to these requirements.

10.2 The contractor shall be responsible for the provision of objective evidence that controls and inspections are effective.

10.3 The Procurement Authority (PA), or their authorised representative, nominated in the contract, reserves the right to perform any examinations or tests to ensure that supplies and/or services conform to the technical requirements of the contract.

10.4 Acceptance of all supplies shall be subject to agreement by the PA, or their authorised representative, that the quality requirements have been fulfilled. The PA, or their authorised representative, reserves the right to reject any supplies which fail to meet the requirements of the contract.

11 PREPARATION FOR DELIVERY

11.1 Materials will be packaged for delivery to the ADF in accordance with DEF (AUST) 1000 (Latest Version) ADF Packaging Standard – Parts 1 to 20.

11.2 Notwithstanding the requirements of any specification quoted herein, each material will have a label securely attached to each container showing at least the following:

11.2.1 ADF Identification Number;

11.2.2 Nomenclature;

11.2.3 Batch Number;

11.2.4 Date of Manufacture;

11.2.5 Manufacturers Name/Brand and applicable Part Number;

11.2.6 Mixing Instructions;

11.2.7 In the case of two pack materials, each component will be clearly labelled as above and with such additional information as is necessary to identify the component;

11.2.8 Colour and colour number (FED STD 595 and/or BS 381C 1980);

11.2.9 U.N Substance Identification Number; and

11.2.10 Hazardous Materials Warning, in accordance with AS 1216 and current Government Regulations.

12 NOTES

12.1 The Commonwealth tender invitation and contract shall nominate the Directorate Quality Assurance – Air (DQA) as the quality assurance authority, the conditions of inspection, and the requirements for contractor's quality control. Approved Engineering Organisations (AEOs) shall utilise DQA services wherever practical.

12.2 In addition to paragraph 10, the designated Quality Assurance Authority must carry out routine acceptance on previously qualified products to test for compliance to paragraphs 5.3 to 5.9 and:

12.2.1 Type A System - all tests contained in annex A, paragraphs 1.1 to 13;

12.2.2 Type B System - all tests designated in paragraph 7;

12.2.3 Type C System - all test designated in paragraph 8; and

12.2.4 Type D system - all tests designated in paragraph 9.

12.2.5

ANNEX A

SUPPLEMENTARY TESTS

1. SUPPLEMENTARY TESTS FOR TYPE A LACQUER SYSTEM

1.1 **Spraying.** The test samples of primer and finish shall be checked for compliance with paragraph 6.2.1 using Australian Standard Method No AS 1580.205.2.

1.2 **Bridging Properties.** The system of primer and finish shall be checked for compliance with paragraph 6.2.2. Apply by spraying the scheme of primer and finish, at the specified total Dry Film Thickness of 40 to 50 microns, to a test section consisting of two 150 mm by 100 mm by 2 mm hard aluminium panels, overlapped for a distance of 25 mm along the longest dimension and riveted at 25 mm intervals along the centre line of the overlap. Allow a period of 4 hours to elapse before applying the finish to the primer. After 48 hours drying of the finish, heat the test section in an oven at $120^{\circ}\text{C} \pm 2^{\circ}\text{C}$ for 96 hours.

2 PREPARATION OF TEST PANELS

2.1 **Test Panels.** The test panels shall not be smaller than the sizes specified in table 1 at annex B and shall be of the materials specified therein and in accordance with the recommendations of such materials given in AS 1580.104.1.

2.2 **Pre-treatment of Test Panels.** Mild steel panels shall be pre-treated in accordance with the procedures contained in AS 1580.105.2. Aluminium test panels shall be pre-treated using the following solution:

- 2.2.1 Butyl Alcohol 35% by weight,
- 2.2.2 Isopropyl Alcohol 25% by weight,
- 2.2.3 Phosphoric Acid 18% by weight, and
- 2.2.4 Distilled Water 22% by weight.

3 COATING OF TEST PANELS

3.1 The test panels shall be sprayed in accordance with the relevant provisions of table 1B at annex B, to give a total dry film thickness of 40-50 microns.

4 DRYING OF TEST PANELS

4.1 The test panels shall be allowed to stand for the appropriate periods as given in Table 1 at Annex B before recoating and carrying out tests. During drying and when standing prior to testing, the panels shall be kept under the following laboratory conditions:

- 4.1.1 Temperature $20^{\circ}\text{C} \pm 2^{\circ}\text{C}$;
- 4.1.2 Humidity $60\% \pm 5\%$;
- 4.1.3 Lighting Indirect Illumination 0.09 - 0.28 lux at the film face; and
- 4.1.4 Air Velocity 0.3 - 0.5 m/sec.

5 SURFACE DRY CONDITION

5.1 A test panel pre-treated according to annex A paragraph 2.2, coated according to annex A paragraph 3 and dried according to annex A paragraph 4 shall be prepared. The lacquer shall dry to a Surface Dry Condition in accordance with annex B under the laboratory conditions of temperature and relative humidity of annex A paragraph 4 and tested in accordance with AS 1580.401.1.

6 HARD DRY CONDITION

6.1 A test panel pre-treated according to annex A paragraph 2.2, coated according to annex A paragraph 3 and dried according to annex A paragraph 4 shall be prepared. The lacquer shall dry hard in accordance with annex B under the laboratory conditions of temperature and relative humidity of annex A paragraph 4 and tested in accordance with AS 1580.401.6.

7 BEND TEST

7.1 A test panel pre-treated according to annex A paragraph 2.2, coated according to annex A paragraph 3 and dried according to annex A paragraph 4 shall be prepared. The method of test shall be AS 1580.402.1, except that the panel shall be cooled to 0°C for 2 hours prior to testing and the test shall be carried out at 0°C.

8 SCRATCH RESISTANCE

8.1 **Dry Condition.** A test panel pre-treated according to paragraph 2.2, coated according to annex A paragraph 3, and dried according to annex A paragraph 4 shall be submitted to a scratch test in accordance with AS 1580.403.1.

8.2 **Water Resistance.** A test panel pre-treated according to annex A paragraph 2.2, coated according to annex A paragraph 3, and dried according to annex A paragraph 4 shall be immersed in distilled water at 15 to 20°C for 4 hours. The panel shall be removed, dried gently by wiping with cotton wool and submitted to a scratch test in accordance with AS 1580.403.1.

9 RESISTANCE TO SALT WATER

9.1 A test panel shall be treated according to annex A paragraph 2.2, coated according to annex A paragraph 3, and dried according to annex A paragraph 4. The back of the panel shall be suitably protected with the system under test. The edges shall be suitably protected by dipping to 6 mm in thinned aluminium enamel. Immerse approximately two thirds ($\frac{2}{3}$) of the panel in a synthetic sea-water solution of the following composition:

9.1.1 Sodium Chloride 30 gm,

9.1.2 Magnesium Chloride Anhydrous 3 gm,

9.1.3 Magnesium Sulphate 2 gm, and

9.1.4 Made up to 1000 ml with Distilled Water.

9.2 After immersion for 7 days in the testing solution at approximately 40°C, remove the panel and examine visually for abnormalities.

10 RESISTANCE TO ORGANIC SOLVENTS

10.1 A test panel pre-treated according to annex A paragraph 2.2, coated according to annex A paragraph 3, and dried according to annex A paragraph 4 shall be immersed 75 mm to 90 mm in a solution of the following composition at room temperature (approximately 20°C) for 4 hours:

10.1.1 Iso-octane (2,3,4 Trimethyl Pentane) - 70% by volume; and

10.1.2 Toluene - 30% by volume.

10.2 The test panel shall be withdrawn and examined for signs of film removal. The test panel shall be allowed to stand for 1 hour, the film examined visually for appearance, then submitted to a bend test according to AS 1580.402.1 using a 13 mm mandrel.

11 RESISTANCE TO SYNTHETIC LUBRICATING OILS

11.1 A test panel pre-treated according to annex A paragraph 2.2, coated according to annex A paragraph 3, and dried according to annex A paragraph 4 shall be immersed 75 mm - 90 mm in lubricating oil complying with MIL-L-23699, Type 2 for 2 hours at $120^{\circ}\text{C} \pm 2^{\circ}\text{C}$. On removal the film shall be examined for failure. The test panel shall be allowed to stand for 1 hour then submitted to the bend test according to AS 1580.402.1 using a 13 mm mandrel.

12 RESISTANCE TO HOT KEROSENE

12.1 A test panel pre-treated according to annex A paragraph 2.2, coated according to annex A paragraph 3, and dried according to annex A paragraph 4 shall be immersed in F-35 AVTUR kerosene complying with DEF(AUST) 206E for 2 hours at $120^{\circ}\text{C} \pm 2^{\circ}\text{C}$. On removal the film shall be examined for failure. The test panel shall be allowed to stand for 1 hour then submitted to the bend test according to AS 1580.402.1 using a 13 mm mandrel.

13 RESISTANCE TO OUTDOOR WEATHERING

13.1 A test panel pre-treated according to annex A paragraph 2.2, coated according to annex A paragraph 3, and dried according to annex A paragraph 4 shall be submitted to an outdoor weathering test according to AS 1580.457.1 with the following modifications:

13.1.1 Assessments of film failure will be made monthly during the exposure period;

13.1.2 Each month the same vertical half of the test panel shall be washed with a solution of an alkyl acryl sulphonate detergent. The solution shall consist of 1 part detergent to 6 parts of water by volume. The washed section shall be carefully rinsed with clean water; and

13.1.3 The panels shall be exposed for 24 months on a 45° sloping exposure rack facing north at an approved test site in a temperate climate.

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ANNEX B TESTS AND REQUIREMENTS

Text and Annex A paragraphs	Name of Test	Test Panel		Drying Period		
		Material	Minimum Size in mm	Primer	1 st Finish Coat	2 nd Finish Coat
1.2 of Annex A	Bridging Properties	Hard Aluminium	150x 100x 2	4 Hours	Up to 45 mins	48 Hrs
5.1 of Annex A	Surface Dry Condition	Hard Aluminium	150x 100x 2	IAW ASTM D 3924	30 min	-
6.1 of Annex A	Hard Dry Condition	Hard Aluminium	100 x 50 x 2	4 Hours	Up to 45 mins	7 Days
5.3 of Text	Colour	Hard Aluminium	100 x 50 x 2	4 Hours	Up to 45 mins	7 Days
5.5 of Text	Gloss	Hard Aluminium	100 x 50 x 2	4 Hours	Up to 45 mins	7 Days
8.2 of Annex A	Scratch Resistance after Immersion in Water Inter-coat Adhesion	Hard Aluminium	100 x 50 x 2	4 Hours	Up to 45 mins	7 Days
6.3.1 of Text	Bend Test	Soft Aluminium	100 x 50 x 1	4 Hours	Up to 45 mins	5 Hours Air Dry, then 120+/-2°C for 4 Days
6.3.2 of Text	Scratch Resistance	Hard Aluminium	100 x 50 x 2	4 Hours	Up to 45 mins	As Above
9.1 of Annex A	Resistance to Salt Water	Mild Steel	100 x 50	4 Hours	Up to 45 mins	7 Days
10.1 of Annex A	Resistance to Organic Solvents	Soft Aluminium	100 x 50 x 1	4 Hours	Up to 45 mins	7 Days
11.1 of Annex A	Resistance to Synthetic Lubricating Oils	Soft Aluminium	100 x 50 x 1	4 Hours	Up to 45 mins	7 Days
12.1 of Annex A	Resistance to Hot Kerosene	Soft Aluminium	100 x 50 x 1	4 Hours	Up to 45 mins	7 Days
13.1 of Annex A	Resistance to Outdoor Weathering	Hard Aluminium	305 x 305 x 2	4 Hours	Up to 45 mins	7 Days

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