NATO STANDARD

AEP-64

PERFORMANCE REQUIREMENTS FOR PAINT SYSTEMS RESISTANT TO CHEMICAL AGENTS AND DECONTAMINANTS, FOR THE PROTECTION OF LAND MILITARY EQUIPMENT

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NORTH ATLANTIC TREATY ORGANIZATION

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NORTH ATLANTIC TREATY ORGANIZATION

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NATO LETTER OF PROMULGATION

18 December 2012

1. The enclosed Allied Engineering Publication AEP-64, PERFORMANCE REQUIREMENTS FOR PAINT SYSTEMS RESISTANT TO CHEMICAL AGENTS AND DECONTAMINANTS FOR THE PROTECTION OF LAND MILITARY EQUIPMENT, which has been approved by the nations in AC/327, is promulgated herewith. The agreement of nations to use this publication is recorded in STANAG 4360.

2. AEP-64 (Edition A) is effective upon receipt.

4. This publication shall be handled in accordance with C-M(2002)60.

5. It is permissible to distribute copies of this publication to Contractors and Suppliers and such distribution is encouraged.

Dr. Cihangir Aksit, TUR Civ
Director NATO Standardization Agency

RECORD OF RESERVATIONS

CHAPTER	RECORD OF RESERVATION BY NATIONS

Note: The reservations listed on this page include only those that were recorded at time of promulgation and may not be complete. Refer to the NATO Standardization Database for the complete list of existing reservations.

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RECORD OF SPECIFIC RESERVATIONS

[nation]	[detail of reservation]

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FORWORD

Member nations agree that the specifications for paints and paint systems will define the minimum quality level that may be demanded.

Any specification prepared by a member nation shall comply with the minimum requirements indicated in this Allied Publication, but could include, in addition to the characteristics and/or tests mentioned in Chapter 5, more stringent quality requirements and/or additional tests intended to improve the performance of the products. This Allied Publication does not include methods on non metal substrates. Methods should be agreed between the supplier and purchaser.

This Allied Publication calls for the use of reagents or substances and/or test methods that may be injurious to health if adequate precautions are not taken. Aiming only technical suitability, this Allied Publication does not however absolve either the manufacturer, the painting operator or the user from the statutory obligations relating to any stage of manufacture, storage, handling, transportation, usage or disposal.

A nation may implement the Allied Publication for land military equipment according to the options (a) and/or (b) below:

a) national equipment;

b) equipment covered by bilateral or multilateral contracts with one or several NATO countries.

For option (a), the Allied Publication shall be considered to have been enforced by a member nation, when the latter has made its specifications comply with the requirements of this Allied Publication.

CHAPTER 1 – INTRODUCTION

The aim of this Allied Publication is to define the minimum quality level for a paint system resistant in particular to chemical agents and decontaminants, for the protection of land military equipment. The paint system shall comply with the requirements of Chapter 2 and Chapter 4 and shall be formulated from products meeting the requirements of Chapter 5..

CHAPTER 2 – SCOPE (inc. Field of Application)

2.1 Scope

2.1.1 This publication deals with the performance requirements for the protection of land military equipment by paint systems having the following functions:

a. Corrosion control.
b. Chemical agent resistance.
c. Camouflage.

2.1.2 This publication defines the minimum requirements which paint systems must comply, in particular with reference to the following:

a. Laboratory performance test methods for assessment of the durability of the protective paint system(s).
b. Evaluation criteria for performance testing.
c. Acceptance criteria.

2.2 Field of Application

2.2.1 The field of application for which this Allied Publication is developed is characterized by:

a. the type of land military equipment.
b. the environment.
c. the durability.
d. the type of paint works.
e. the type of substrate and surface treatment.
f. the type of paints.

2.2.2 The Type of Land Military Equipment

a. It covers internal and external surfaces for:
   (1) Armoured vehicles and their appurtenances.
   (2) Transportation vehicles and their appurtenances.
   (3) Engineering equipment.
   (4) Shelters (including COLPRO Collective Protective Shelters in accordance with AEP-54).
   (5) Portable and deployable Decontamination Systems.

b. It does not cover ammunitions and aircrafts.

2.2.3 The Environment

The land military equipments are submitted to a wide range of environments versus the operational use. The average environment considered in this publication corresponds to the corrosivity category C3 (medium) as defined in the standard ISO 12944-2.

2.2.4 The Durability

The considered paint system is of High Durability in accordance with ISO 12944-1 and must have a minimum life expectancy of 15 years (ISO 12944-1) before a complete removal. During this period, localized repairs and general topcoat applications are undertaken. The colorimetric properties of the topcoat should have a good stability for a minimum period of 2 years.

2.2.5 The Type of Paint Works

The applications covered by this publication are first application or equivalent (after total removal of pre-existing coatings). The first application paint system must be adapted to maintenance procedures such as localized repairs (due to mechanical damages, weld burn, etc) and general topcoat application.

2.2.6 The Type of Substrate and Surface Treatment

The substrates contained in this AP are steel and aluminium alloys. For application on equipment, substrate cleaning and pre-treatment shall be undertaken in accordance with the paint manufacturers' recommendations. The tests carried out in this publication are without any pre-treatment as defined in ISO 4618.

2.2.7 The Type of Paints

a. The paints shall be suitable for both spray and brush application. The paints shall be capable of being applied at a range of temperatures, but this may incur a penalty with regard to pot life and drying times.

b. The materials shall meet the relevant operational environmental requirements of each member Nation.

c. Gloss levels, emissivity and reflectance values are not covered by this publication.

CHAPTER 3 – NORMATIVE REFERENCES

AEP-7	Nuclear, biological and chemical (NBC) defence factors in the design, testing and acceptance of military equipment
AEP-54	Collective Protection (COLPRO) in a Chemical, Biological, Radiological and Nuclear (NBC) Environment
AEP-65	Performance Requirements and Test Method for Paint Systems Resistant to Chemical Warfare Agents
EN 3212	Aerospace series - Corrosion resistance test by alternate immersion in buffered sodium chloride solution
ISO 1514	Paints and varnishes - Standard panels for testing
ISO 1518	Paints and varnishes - Scratch test
ISO 1519	Paints and varnishes - Bend test (cylindrical mandrel)
ISO 2409	Paints and varnishes - Cross-cut test
ISO 2808	Paints and varnishes - Determination of film thickness
ISO 2812-1	Paints and varnishes - Determination of resistance to liquids Part 1: General Methods
ISO 2812-2	Paints and varnishes - Determination of resistance to liquids Part 2: Water Immersion
ISO 2813	Paints and varnishes - Measurement of specular gloss of non-metallic paint films at 20 degrees, 60 degrees and 85 degrees
ISO 3668	Paints and varnishes - Visual comparison of the colour of paints
ISO 3696	Water for analytical laboratory use. Specification and test methods
ISO 4618	Paints and varnishes - Terms and definitions
ISO 4623-2	Paints and varnishes - Determination of resistance to filiform corrosion – Part 2: Aluminium substrates
ISO 4628-2	Paints and varnishes - Evaluation of degradation of coatings - Designation of quantity and size of defects, and of intensity of uniform changes in appearance - Part 2: Assessment of degree of blistering
ISO 4628-8	Paints and varnishes - Evaluation of degradation of coatings - Designation of quantity and size of defects, and of intensity of uniform changes in appearance - Part 8: Assessment of degree of delamination and corrosion around a scribe
ISO 4628-10	Paints and varnishes - Evaluation of degradation of coatings - Designation of quantity and size of defects, and of intensity of uniform changes in appearance - Part 10: Assessment of degree of filiform corrosion

ISO 6270-1	Paints and varnishes - Determination of resistance to humidity - Part 1 Continuous condensation
ISO 6272-1	Paints and varnishes - Falling weight test
ISO 7724-2	Paints and varnishes – Colorimetry: Part 2 Colour Measurement
ISO 8503-1	Preparation of steel substrates before application of paints and related products - Surface roughness characteristics of blast-cleaned steel substrates - Part 1: Specifications and definitions for ISO surface profile comparators for the assessment of abrasive blast-cleaned surfaces
ISO 9227	Corrosion tests in artificial atmospheres – Salt spray tests
ISO 11507	Paints and varnishes - Exposure of coatings to artificial weathering – Exposure to fluorescent UV and water
ISO 11997-1	Paints and varnishes - Determination of resistance to cyclic corrosion conditions - Part 1: Wet (salt fog)/dry/humidity
ISO 12944-1	Paints and Varnishes - Corrosion Protection of Steel Structures by Protective Paint Systems - Part 1: General Introduction
ISO 12944-2	Paints and Varnishes - Corrosion Protection of Steel Structures by Protective Paint Systems - Part 2: Classification of Environments
ISO 17872	Paints and varnishes - Guidelines for the introduction of scribe marks through coatings on metallic panels for corrosion testing
STANAG 1135	Interchangeability of fuels, lubricants and associated products used by the Armed Forces of the North Atlantic Treaty Nations

CHAPTER 4 – GENERAL CHARACTERISTICS

4.1 Requirement

The paint system and each of its components (primer and finish) shall meet the requirements of Chapter 5.

4.2 Description of Paint Systems

Table 1 below lists the current components of a multi-coat paint system, with corresponding symbols P, F and S, dry film thickness and tolerance for each coat. The dry film thickness values given in Table 1 are for production painting.

Table 1 - Components of Multi-coat Paint System

Component Designation	Symbol	Minimum Dry Film Thickness in µm
Primer	P	Not less than the minimum recommended by the paint manufacturer
Finishing Paint	F	Not less than the minimum recommended by the paint manufacturer
Paint System	S	75 +

4.3 Particular Characteristics

4.3.1 The following tests shall be carried out on the reference paint system (see Chapter 6), unless otherwise indicated.

4.3.2 The paint manufacturer must supply the information detailed in Chapter 8

CHAPTER 5 – COMPOSITION AND PERFORMANCE REQUIREMENTS FOR PAINTS

5.1 Primer "P"

5.1.1 Two primer types may be distinguished, namely:

(a) For the protection of ferrous substrates.

(b) For the protection of non-ferrous substrates.

Note. Some corrosion resistant primers may be used on both ferrous and non-ferrous substrates.

5.1.2 Composition

The primer shall consist of a pigmented multi-pack resin.

Note. A technical justification is required for the use of chromates.

5.2 Finishing Paints "F"

5.2.1 Composition

The finishing paint shall consist of a pigmented, durable multi-pack resin.

5.3 Test Requirements for Primers, Finish Coats and Paint System

5.3.1 A sample taken from any part of the supply shall comply with the requirements in Table 2. Tests shall be carried out on P or S as indicated.

5.3.2 It is strongly recommended to conduct the optional screening Test 2 prior to the Chemical Agent Resistance test of AEP-65 (test 12), as it provides a general indication of pass/fail criteria of the Chemical Agent Resistance test.

5.3.3 Corrosion Resistance Tests for steel shall be undertaken by conducting either Test 14a or 14b; and for aluminium alloys either Test 15a or 15b.

Table 2 – Test Requirements

No	P	S	Test	Substrate (1)	Test Method	Limits
1	•	•	Appearance	-	-	Surface without visible defects * when prepared in accordance with Annex C Method 1C (No wrinkling, orange peel, inclusions or other visual defects).
2#		•	Screening Test (Resistance to Tri-n-Butyl Phosphate)	Aluminium Alloy 5083 or 7020-T6 and Steel	Method 1	No wrinkling, blistering, swelling or other visual defects*. Optical characteristics determined in accordance with Test 3. Scratch Test ISO 1518. Needle not to penetrate the substrate under 1000g load.
3		 • • •	Optical Characteristics: Visual comparison of the colour of the paints Specular Gloss Colorimetry	Aluminium Alloy 5083 *or* 7020-T6 *and* Steel	 ISO 3668 ISO 2813 ISO 7724-2	Optical requirements specified in the contract or order before and after testing to Test No 2, 7,8,10, 13,and 16 Selection of specific details for testing described in these standards require agreement between purchaser and supplier.
4		•	Scratch Hardness	Aluminium Alloy 5083 *or* 7020-T6 *and* Steel	ISO 1518 on total paint system	≥ 1500 g No penetration of finish coat to primer*.
5		•	Flexibility (cupping test)	Aluminium Alloy 5083 or 7020-T6 *and* Steel	BS EN ISO 1520 X 10 Magnification	No cracking at an indentation depth of 3 mm
6	•	•	Cross-Cut Resistance (Adhesion)	Aluminium Alloy 5083 or 7020-T6 *and* Steel	ISO 2409	Classification*: ≤ 1
7		•	Continuous Condensation	Aluminium Alloy 5083 or 7020-T6 *and* Steel	ISO 6270-1 240 h	After 24 hours air drying: Adhesion (cross-cut test) ISO 2409 Classification ≤ 1. Optical characteristics determined in accordance with Test 3. Optical tolerances - limits to be agreed between the supplier and the purchaser. No wrinkling, blistering, swelling or other visual defects*.

8		•	Hydrocarbons Resistance	Aluminium Alloy 5083 or 7020-T6 *and* Steel	Method 2	After 24 hours air drying: Adhesion (cross-cut test) ISO 2409 Classification ≤ 1. Optical characteristics determined in accordance with Test 3. Optical tolerances - limits to be agreed between the supplier and the purchaser. No wrinkling, blistering, swelling or other visual defects*.
9		•	Acids Resistance	Aluminium Alloy 5083 or 7020-T6 *and* Steel	Method 3	No blistering, wrinkling or other visible defects*.
10		•	Decontaminants Resistance	Aluminium Alloy 5083 or 7020-T6 *and* Steel	Method 4	Immediately after emersion and after 24 hours: Limits of visually detectable defects to be agreed between purchaser and supplier. Adhesion (cross-cut test) ISO 2409 Classification ≤ 1. Optical characteristics determined in accordance with Test 3. Optical tolerances - limits to be agreed between the supplier and the purchaser.
11		•	Falling Weight Test	Aluminium Alloy 5083 or 7020-T6 *and* Steel	Method 5	No cracking, peeling of the film or other visible defects*.
12		•	Chemical Agents Resistance	AEP-65	AEP-65	AEP-65
13		•	Artificial Weathering Resistance	Aluminium Alloy 5083 or 7020-T6 *and* Steel	Method 6	Before and after exposure: No cracking or chalking*. Adhesion *(cross-cut test)* ISO 2409 Classification ≤ 1. Colour difference ≤ 2 ΔE units. Other Optical characteristics determined in accordance with Test 3. Optical tolerances - limits to be agreed between the supplier and the purchaser.
14a		•	Corrosion Resistance (Neutral Salt Spray)	Steel	ISO 9227 3.2.2 (using scribed test panel in accordance with ISO 17872 b = 0.3 - 1.0 mm)	After 480 h exposure*: No corrosion of the panels. c ≤ 1.5 mm creapage from scribe in accordance with ISO 4628-8. Blisters according to ISO 4628-2: size ≤ 2 density ≤ 3 After 24 hours air drying: Adhesion (cross-cut test) ISO 2409 Classification ≤ 1.

14b		•	Corrosion Resistance (Cyclic Corrosion)	Steel	ISO 11997-1 cycle B (using v-shaped or rectangular test panel in accordance with ISO 17872 b = 0.2 - 1.0 mm)	After 1008 h exposure*: Assess degree of delamination around the scribe in accordance with ISO 4628-8. Degree of delamination in accordance with 5.2.2 (after drying) not exceeding 1.5 mm
15a	•		Aluminium Alloys Corrosion Resistance by Alternate Immersion	Burnished Aluminium Alloys: 2024-T3 unclad, 5083 and 7020-T6	EN 3212	No flaking, blistering or corrosion, c ≤ 1.2 mm from scribe in accordance with ISO 4628-8.* After 24 hours air drying: Adhesion *(cross-cut test)* ISO 2409 Classification ≤ 1.
15b	•		Aluminium Alloys Corrosion Filiform Corrosion Resistance	Burnished Aluminium Alloys: 2024-T3 unclad, 5083 and 7020-T6	EN ISO 4623-2	There shall be no blistering or other film defect. Corrosion. c ≤ 5 mm from scribe in accordance with ISO 4628-10.*
16	•	•	Hydraulic Fluids Resistance	Aluminium Alloy 5083 *or* 7020-T6 *and* Steel	Method 7	No wrinkling, blistering, swelling or other visual defects*. Optical characteristics determined in accordance with Test 3. Adhesion *(cross-cut test)* ISO 2409 Classification ≤ 1.

Optional test
*****Examination by magnification 10X
(1) See Chapter 6

CHAPTER 6 – STANDARD PANELS FOR TESTING

6.1 Choice of Substrate

The appropriate substrate for test shall be chosen from Table 3.

Table 3 - Ferrous and Non Ferrous Substrates

Substrate	Grade
Steel	ISO 1514 para 3.1
Aluminium Alloy	2024-T3 unclad
Aluminium Alloy	5083
Aluminium Alloy	7020-T6

Note. The size and number of test panels required for each test are shown in Annex A.

6.2 Surface Preparation

Surface preparation shall be in accordance with the methods detailed in Table 4. For Aluminium alloy the appropriate method shall be agreed between the supplier and the purchaser.

Table 4 - Substrate Preparation

Substrate	Preparation
Steel	Burnishing in accordance with ISO 1514 para 3.5
Aluminium Alloy 2024-T3 Unclad	Burnishing in accordance with ISO 1514 para 6.4
Aluminium Alloy 5083	
Aluminium Alloy 7020 T6	

6.3 Paint Application

6.3.1 Ferrous and Non Ferrous Substrates - Total System (reference paint system) Testing (S), as required in Chapter 5.

(a) Apply by spraying, in accordance with the manufacturers' technical data sheet, successively the primer and finish paint, to obtain a total minimum dry film thickness (dft) as recommended by the paint manufacturer (± 10 µm). The primer coat shall be left to dry for 24 hours before applying the following coat(s), unless otherwise indicated, in the paint manufacturers technical data sheet.

(b) Allow the paint system to dry under standardized conditions (23 ± 2 °C and RH = 50 ± 5 %) for a period of 7 days after the application of the final coat, unless otherwise indicated*.

Note. It may not be possible to apply the finishing paint in one coat due to possible sagging; therefore, two coats may be necessary to achieve the correct thickness.

6.3.2 Ferrous and Non Ferrous Substrates - Single Component Testing (P) as required in Chapter 5.

(a) Apply by spraying, in accordance with the manufacturers technical data sheet a coat of component (P) on the appropriate substrate.

(b) Allow the paint to dry under standardized conditions (23 ± 2 °C and RH = 50 ± 5 %) for a period of 7 days after the application of the final coat, unless otherwise indicated*.

* For Chemical Agents Resistance (Test 12) panel conditioning is defined in AEP-65.

6.4 Number, Dimensions and Substrate for Test Panels

6.4.1 Annex A details the information on the substrates used and the substrate dimensions that are required for testing. The panel dimensions listed are to be used unless otherwise specified in the appropriate test method.

6.4.2 All paint testing is to be carried out, at least in duplicate (2 test panels), however some tests may require more than duplication to which the appropriate test standard must be referred to. Chemical agent resistance requires 5 test panels for each chemical agent and 1 reference panel for each agent.

CHAPTER 7 – TEST METHODS

7.1 Method 1 – Resistance to Tri-n-butyl phosphate*

7.1.1 Immerse, in a vertical position, approximately 3/4 of the panel length for 168 hours at (70 ± 2°C).

7.1.2 When the immersion process is complete, remove residual material by dabbing using absorbent paper, and allow to dry for 1 hour in standardized conditions (23 ± 2°C and RH = 50 ± 5 %).

7.1.3 Examine the coating appearance at 10X magnification in order to detect possible defects, such as blistering (in accordance with ISO 4628-2), wrinkling, swelling or other visible defects.

7.1.4 Perform the scratch test in accordance with ISO 1518. The paint system shall show no penetration of the needle to the primer under a 1000 g load.

*Fluid used: Tri-n-butyl phosphate (technical quality).

7.2 Method 2 – Resistance to Hydrocarbons

7.2.1 Immerse approximately 3/4 of the panel length at 23 ± 2°C for 24 hours, in a 30/70 v/v mixture of toluene and 2,2,4 trimethylpentane* (iso-octane) in accordance with Method 1, Procedure A of ISO 2812–1.

7.2.2 Leave to dry for 24 hours in standardised conditions (23 ± 2°C and RH = 50 ± 5 %) and re-examine at l0X magnification for blistering *(in accordance with ISO 4628/2),* wrinkling, swelling, colour change or other visible defects.

7.2.3 Determine the optical characteristics as defined in Test 3, Table 2, Chapter 5.

7.2.4 Perform the cross cut in accordance with ISO 2409.

*Recognized analytical quality (usually > 95 % purity).

7.3 Method 3 – Resistance to Acids

7.3.1 Place 3 to 5 ml of a 10 % v/v sulphuric acid solution onto the coated side of the test panel and cover with a 50 mm diameter watch glass.

7.3.2 Allow the coating to be exposed to the acid for 1 hour.

7.3.3 Rinse thoroughly with deionized water in accordance with ISO 3696 Grade 3.

7.3.4 Leave to dry for 24 hours in standardized conditions (23 ± 2°C and RH = 50 ± 5 %).

7.3.5 Examine the coating at 10X magnification in order to detect possible defects, such as blistering (in accordance with ISO 4628/2), wrinkling, swelling, colour change or other visible defects.

7.4 Method 4 – Resistance to Decontaminants

7.4.1 Fully immerse the test panel, in a vertical position, in a suitable solution of decontaminant (eg. DS2, BX24, GDS2000, Sodium or Calcium Hypochlorite) contained in AEP-7, held at (23 ± 2)°C.

7.4.2 Carry out the cycle consisting of the following operations:

(a) Immerse the panel for 30 minutes.

(b) Rinse the panel with running water.

(c) Dry without rubbing using absorbent paper.

7.4.3 Immediately examine the coating at 10X magnification in order to detect possible defects, such as blistering (in accordance with ISO 4628/2), swelling, colour change or other visible defects.

7.4.4 Leave to dry for 24 hours in standardized conditions (23 ± 2°C and RH=50 ± 5 %) and re-examine at 10X magnification for blistering (in accordance with ISO 4628/2*),* wrinkling, swelling, colour change or other visible defects.

7.4.5 Determine the optical characteristics as defined in Test 3, Table 2, Chapter 5.

7.4.6 Perform the cross cut test in accordance with ISO 2409.

7.5 Method 5 – Falling Weight Test

Carry out the test on the front side of the test sample in accordance with ISO 6272-1 using a weight of 1000 grams and a stop to limit the indentation depth to 2.5 mm. Examine the coating using a 10X magnification for cracking, peeling or other visible defects.

Note. It will be necessary to ensure that the height of fall of the weight is sufficient to produce an indentation depth of at least 2.5 mm in the absence of the stop. For steel test panels complying with ISO 1514, a height of 1000 mm has been found to be suitable.

7.6 Method 6 – Resistance to Artificial Weathering

7.6.1 Test the panel in accordance with ISO 11507, Method A, Type II, using the following specifications:

7.6.1.1 Luminous source: UV-A lamp (λ= 340 nm).

7.6.1.2 Cycle characteristics:

(a) Exposure to UV duration:	4 hours	temperature: (60 ± 3) ^{0}C;
(b) Condensation duration:	4 hours	temperature: (50 ± 3) ^{0}C;
(c) Total Duration:	1008 hours	

7.6.2 After exposure, leave to dry for 24 hours in standardized conditions (23 ± 2°C and RH = 50 ± 5 %), unless otherwise indicated.

7.6.3 Examine the coating appearance at 10X magnification for cracking, chalking or other visible defects.

7.6.4 Determine the optical characteristics as defined in Test 3, Table 2, Chapter 5.

7.6.5 Perform the cross-cut test in accordance with ISO 2409.

7.7 Method 7 – Resistance to Hydraulic Fluids

7.7.1 Test the panel in accordance with ISO 2812-1 (Method 1, Procedure A, Para. 7.4) according to the following procedure:

7.7.1.1 Hydraulic fluid used: H-542 brake fluid*. (* see STANAG 1135).

7.7.1.2 Immerse, in a vertical position, approximately 3/4 of the panel length for 24 hours at (70 ± 2)°C.

7.7.1.3 When the immersion process is complete, remove residual material by dabbing using absorbent paper, and allow to dry for 24 hours in standardized conditions (23 ± 2°C and RH = 50 ± 5 %).

7.7.1.4 Examine the coating appearance at 10X magnification in order to detect possible defects, such as blistering (in accordance with ISO 4628-2), wrinkling, swelling or other visible defects.

7.7.1.5 Perform the cross-cut test in accordance with ISO 2409.

CHAPTER 8 – PAINTS AND PAINT SYSTEMS - SUPPLIERS DATA

The paint system description sheet should contain the minimum following information:

8.1 Applied System

Information for Applied System
- Manufacturers name and address
- Specification(s) used
- Colour and gloss
- General use and limitations
- Substrate surface and preparation
- Paint System Description inc. dft (µm)
- Quantity

8.2 Primer and Finishing Paint

Specific Information for Primer and Finishing Paint
- Trade name
- Main function
- Chemical class
- Dry film thickness (µm)
- Colour
- Material safety data sheet
- Batch number
- Date of manufacture
- Substrate surface and preparation condition for paint application
- Quantity
- Mixing ratio
- VOC content

8.3 Other Information

Other Information
- Qualification references
- Product data sheets containing all the other optional relevant information

ANNEX A - TEST PANEL SUBSTRATES AND DIMENSIONS

Test	Chapter 5 Table 2 Test No	Substrate	Number of Test Panels Required	Test Panels Dimensions (mm)
Optical Characteristics	3	Aluminium Alloy 5083 *or* 7020-T6	2	150 x 100 x 0.5
Scratch Hardness	4	Aluminium Alloy 5083 *or* 7020-T6 *and* Steel	4	125 x 100 x 0.5
Flexibility (cupping test)	5	Aluminium Alloy 5083 *or* 7020-T6 *and* Steel	8	100 x 50 x 1
Cross-Cut Resistance *(Adhesion*)	6	Aluminium Alloy 5083 *or* 7020-T6 *and* Steel	8	150 x l00 x 0.5
Continuous Condensation	7	Aluminium Alloy 5083 *or* 7020-T6 *and* Steel	8	150 x 100 x 0.5
Hydrocarbons Resistance	8	Aluminium Alloy 5083 *or* 7020-T6 *and* Steel	8	150 x 100 x 0.5
Acids Resistance	9	Aluminium Alloy 5083 *or* 7020-T6 *and S*teel	4	150 x 100 x 0.5
Decontaminants Resistance	10	Aluminium Alloy 5083 *or* 7020-T6 *and* Steel	4	150 x 100 x 0.5
Falling Weight Test	11	Aluminium Alloy 5083 *or* 7020-T6 *and* Steel	4	120 x 120 x 2
Chemical Agents Resistance	12	Aluminium Alloy 5083 *or* 7020-T6 *or* Steel	18 (includes 3 reference panels)	Refer to AEP-65
Artificial Weathering Resistance	13	Aluminium Alloy 5083 *or* 7020-T6 *or* Steel	4	150 x 100 x 0.5
Corrosion Resistance (Neutral Salt Spray)	14a	Steel	2	150 x 100 x 0.5
Corrosion Resistance (Cyclic Corrosion)	14b	Steel	2	150 x 100 x 0.5
Aluminium Alloys Corrosion Resistance by Alternate Immersion	15a	Aluminium Alloy: 2024-T3 Unclad *and* 5083 *and* 7020-T6	7	100 x 40 x 1
Aluminium Alloys Filiform Corrosion Resistance	15b	Aluminium Alloy: 2024-T3 Unclad *and* 5083 *and* 7020-T6	7	100 x 40 x 1
Hydraulic Fluids Resistance	16	Aluminium Alloy 5083 *or* 7020-T6 *and* Steel	8	150 x 100 x 0.5
Screening Test - Resistance to Tri-n-Butyl Phosphate	17	Aluminium Alloy 5083 *or* 7020-T6 *and* Steel	4	150 x 100 x 0.5