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DRAWING NO: CMMP025

Cessna Aircraft Company
P.O Box 7704
WICHITA, KS 67277

ENGINEERING DRAWING AND PART LIST SIGNATURE AUTHORIZATION
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ORIGINATOR	LaShelle Brown (APPROVE 11/06/2014 12:21:40)
M&P	Sharan Gopasetty (APPROVE 11/07/2014 00:44:10)
M&P_CHECK	Jennifer Graham-Rateliff (APPROVE 11/10/2014 09:29:56)
M&P_GROUP	Bret Vogel (APPROVE 11/10/2014 15:31:14)
CTC	Brent Anderson (APPROVE 11/11/2014 13:01:03)
ME	Terri Goforth (APPROVE 11/13/2014 07:35:26) for Jason Neal
QUALITY	Richard Downs (APPROVE 11/11/2014 13:58:39)
SI_MANAGER	Ab Dirkzwager (APPROVE 11/12/2014 07:52:14)
M&P_EFFECTIVITY	Amit Tamhane (APPROVE 11/13/2014 07:47:39)
UM ROLE	Bret Vogel (APPROVE AS UM 11/13/2014 08:14:45)
RELEASE_M&P	LaShelle Brown (APPROVE 11/13/2014 12:19:24)

CESSNA AIRCRAFT COMPANY
AIRCRAFT DIVISION
WICHITA, KANSAS 67277

CESSNA SPECIFICATION

CMMP025

PROCUREMENT REQUIREMENTS FOR WROUGHT ALUMINUM SHEET AND PLATE

Prepared By: Krish Patni

Checked By: _____

Approved By: A. Ayala
Material & Process Supervisor

Approved By: R.B. Held
Product Engineering Manager

Effectivity Date: 5 July 94

Effectivity Approval: A. Ayala
Product Engineering

_____
Manufacturing Engineering

Keith C. Kastner
Quality and Reliability

Revisions

Specification revisions are identified with an alphanumeric identifier (Example A, A1, A2, B, B1, B2, etc.) The letter indicates the revision level. The number indicates the version. For any parts or processes, compliance to the latest revision level of the specification is required. Compliance to the latest version level is desirable, but not required.

To view previous changes made to this specification, please refer to previous revisions.

Letter	Date Written	Description
V	9-25-14	REASON: 1) Updated thickness range for 7150-T7751 plate material from 0.250-0.499 to 0.250-3.000 for Alcoa Davenport Works per MMPDS/MIL-HDBK-5 Meeting Agenda Item 11-65 and Item 98-14 in Table II. 2) Updated Alcoa Davenport Works facility address per supply chain input. 3) Added specification reference AMS4315 for 7075-T76 sheet and 7075- T7651 plate; AMS4048 for Alclad 7075-O sheet; AMS4049 for Alclad 7075-T6 sheet; AMS4316 for Alclad 7075-T76 sheet in Section 3.0, Tables I and II. 4) Added Alcoa Davenport Works to Table II for 7475-T7351 plate (0.250-1.300") per M&P Report 12-359-238. 5) Added Kaiser Trentwood Works to Table II for 7050-T7651 plate (0.250-1.000" and 3.001-3.250") per M&P Report 12-359-289. 6) Added AMAG Rolling to Table I for the following alloys and thickness range per M&P report 09-352-052: 2024-T3 sheet (0.010-0.020" and 0.129-0.190"), Alclad 2024-T3 MRS sheet (0.010- 0.062"), 6061-T4 sheet (0.021-0.125"), Alclad 7075- T6 sheet (0.040-0.125"), 7075-T6 sheet (0.040-0.125"). 7) Added AMAG Rolling for Alclad 7075-O sheet (0.063-0.187") to Table I per M&P report 12-359-007. 8) Added AMAG Rolling to Table II for the following alloys and thickness range per M&P report 12-359-007: 2024-T351 plate (0.500-3.000"), 6061-T651 plate (0.500-4.000"), 7050-T7451 plate (0.250- 3.000"), 7075-T651 plate (0.500-4.000"), 7075-T7351 plate (0.500-3.500"). 9) Few minor editorial changes.

Approvals: See Separate Signature Sheet Effectivity Date: 2-20-15

†UM Signature indicates FAA approval of the type design; this is a minor (Class II) change; and all required substantiating data has been reviewed and found to satisfy applicable 14 CFR requirements. No further approval using FAA Form 8100-9/8110-3 is required.

Table of Contents

1.0 SCOPE

This specification covers the procurement requirements for wrought metallic plate and sheet and is applicable when referenced on the applicable engineering document or the purchase order. The requirements of this specification supplement the Federal, Industry, or Cessna material specification (CMMPXXX) called out on the applicable engineering document or Purchase Order.

Cessna Material and Process (M&P) Engineering is the final authority on the interpretation of the contents of this specification.

2.0 REFERENCES

Except where a specified issue is indicated, the current issue of the following publications shall form a part of the specification to the extent indicated herein.

2.1 Cessna Specifications

CSTI006	Ultrasonic Inspection Requirements and Procedures for Wrought Metal Products
CMMP006	Polished Aluminum Sheet, Procurement and Inspection
CMMP019	Surface Quality Characteristics of Alclad or Bare Aluminum: Flat Sheet and Coiled Sheet
CMMP021	Aluminum Alloys, Fine Grain Quality, Sheet and Coil Form

2.2 American Society for Testing and Materials Specifications

ASTM B594	Standard Practice for Ultrasonic Inspection of Aluminum Alloy Wrought Products for Aerospace Applications
ASTM B666	Standard Practice for Identification Marking of Aluminum and Magnesium Products

2.3 Other Specifications

AMS-STD-2154	Inspection Ultrasonic, Wrought Metals, Process for
AMS2355	Quality Assurance Sampling and Testing Aluminum Alloys and Magnesium Alloys

3.0 MATERIAL

CMMP008	Aluminum Alloy 2524-T3 Formplus, Bare and Alclad Sheet
CMMP010	Oversize 7050 Aluminum Alloy Plate
CMMP017	Aluminum Alloy 6022-T4 Sheet
CMMP018	Aluminum Alloy 6013
CMMP020	Aluminum Alloy 2024-T4 Kaiser T-Form, Bare and Alclad Sheet
CMMP023	Aluminum Alloy 2324-T39 Plate
CMMP030	Oversize 7075 Aluminum Alloy Plate
AMS-QQ-A-250/4	Aluminum Alloy 2024, Plate and Sheet

AMS-QQ-A-250/5	Aluminum Alloy Alclad 2024, Plate and Sheet
AMS-QQ-A-250/11	Aluminum Alloy 6061, Plate and Sheet
AMS-QQ-A-250/12	Aluminum Alloy 7075, Plate and Sheet
AMS-QQ-A-250/13	Aluminum Alloy Alclad 7075, Plate and Sheet
AMS-QQ-A-250/24	Aluminum Alloy, 7075, Plate and Sheet (Improved Exfoliation Resistance)
AMS-QQ-A-250/25	Aluminum Alloy Alclad, 7075, Plate and Sheet (Improved Exfoliation Resistance)
AMS 4025	Aluminum Alloy, Sheet and Plate, 1.0Mg 0.60Si 0.28Cu 0.20Cr (6061-O) Annealed
AMS 4026	Aluminum Alloy, Sheet and Plate, 1.0Mg 0.60Si 0.28Cu 0.20Cr (6061-T4 Sheet, -T451) Solution Heat Treated and Naturally Aged
AMS 4027	Aluminum Alloy, Sheet and Plate, 1.0Mg 0.60Si 0.28Cu 0.20Cr (6061-T6 Sheet, -T651 Plate) Solution Heat Treated and Precipitation Heat Treated
AMS 4050	Aluminum Alloy Plate, 7050-T7451
AMS 4084	Aluminum Alloy Sheet, 7475-T761
AMS 4085	Aluminum Alloy Sheet, 7475-T761
AMS 4100	Aluminum Alloy Alclad Sheet, 7475-T761
AMS 4201	Aluminum Alloy Plate, 7050-T7651
AMS 4202	Aluminum Alloy Plate, 7475-T7351
AMS 4252	Aluminum Alloy Plate, 7150-T7751
AMS 4085	Aluminum Alloy Sheet 5.7Zn - 2.2Mg - 1.6Cu - 0.22Cr (7475-T761) Solution Heat Treated and Overaged
AMS 4315	Aluminum Alloy Sheet and Plate 7075: (-T76 Sheet, -T7651 Plate) Solution and Precipitation Heat Treated
AMS 4316	Aluminum Alloy, Alclad Sheet and Plate: (-T76 Sheet, -T7651 Plate) Solution and Precipitation Heat Treated
AMS 4048	Aluminum Alloy Sheet and Plate, Alclad: (Alclad 7075-O) Annealed
AMS 4049	Aluminum Alloy Sheet and Plate, Alclad: (Alclad 7075; -T6 Sheet –T651 Plate) Solution and Precipitation Heat Treated

4.0 REQUIREMENTS

4.1 Ultrasonic Inspection

Producer shall perform the ultrasonic inspection per CSTI006 or AMS-STD-2154, Class A, or per ASTM B594, Class A, on all wrought aluminum alloys listed in Paragraph 3.0 with thickness dimension 0.750 inch or greater.

The producer shall include the ultrasonic certification along with each shipment.

4.2 Tensile Properties

Tensile properties shall meet the requirements of the applicable material specification.

4.3 Electrical Conductivity

Electrical conductivity tests shall meet the requirements of the applicable material specification. It is permissible to measure the electrical conductivity on the tensile specimens and/or the delivered sheet and plate material in the –T temper.

4.4 Chemistry

The material shall meet the chemistry requirements of the applicable material specification.

4.5 Polished Aluminum Sheet

When required by Cessna Engineering, polished aluminum sheet shall meet the requirements of CMMP006.

4.6 Process Control Documents

In certain cases, qualified producers listed in this specification have special process or testing requirements documented in an approved Process Control Document (PCD).

These cases include, but are not limited to:

a. Material Producers using services such as, but not limited to, heat treatment, ingot production, or other special processes outside their facility that affect the properties of the final product.

b. Alloys or tempers requiring closer than standard process controls or inspections to ensure consistent properties.

c. Other special circumstances.

When a PCD is specified, material shall be produced to those requirements, and the producing mill shall include the PCD number on their certification. Producers shall submit PCDs to Cessna M&P Engineering for review and approval. Once approved, no deviations from the PCD are allowed without prior Cessna M&P Engineering approval.

4.7 Certification

The producer shall certify that the ultrasonic test results, as required, tensile properties, electrical conductivity, as required, and chemistry meet the applicable material specification for each lot of material supplied in the -T temper. The producer shall also certify that the capability test results of

material supplied in the –O temper meet the applicable material specification. Certification shall also include any required PCD number.

5.0 MARKING AND IDENTIFICATION

Marking and identification shall be per ASTM B666. In addition, the producer shall include ultrasonic inspection marking by stenciling; or with ultrasonic acceptance stamp on each piece in ink or by steel stamp at one end and preferably on both ends.

6.0 QUALITY

Controls shall be established to ensure that the requirements of this specification are complied with.

7.0 QUALIFIED PRODUCERS LIST

Material per this specification shall only be procured from the producers listed in Tables I and II.

7.1 Approval of a Producer Facility

Producers are qualified by facility, the addresses of which are listed in Table III. The facility qualification is not impacted by a producer name change, provided the producer can demonstrate there are no changes to the manufacturing processes, inspection/testing processes, or quality system.

Any changes to the manufacturing and/or inspection/testing processes that may affect material properties must be approved by Cessna M&P before implementation. M&P will determine the requalification steps required for approval.

-O- and –W- temper qualification shall be based on data analysis of capability test results per the applicable material specification.

The QPL is an engineering approval. Additional approval by Supply Chain Quality is required prior to material procurement.

7.2 Data Requirements for Statistical Analysis

The producer is required to submit sufficient data for each alloy, form and thickness range to establish material properties on a statistical basis. Cessna M&P Engineering will evaluate the data to ensure conformance to design requirements.

7.3 Renewal of Qualifications

Cessna M&P Engineering may request an audit and/or data for assessment for renewal of prior approval. The type and quantity of data needed will be communicated to the producer at the time of such request.

7.4 Process Control Documents

Process Control Documents (PCD) as defined in section 4.6, when applicable, are shown after the producer's name (For example: PCD-01) in Tables I & II.

Table I
Qualified Producers List for Sheet Material

Alloy (Note 1)	Temper	Thickness (in)	Qualified Producers	Specifications
2024	O	0.010 - 0.020	Kaiser Trentwood Works Alcoa Davenport (PCD-02)	AMS-QQ-A-250/4 CMMP019
2024	O	0.021 - 0.125	Alcoa Davenport Works Kaiser Trentwood Works AMAG Rolling Constellium Rhenalu Aleris Aluminum Koblenz	AMS-QQ-A-250/4 CMMP019
2024	O	0.126 - 0.128	Aleris Aluminum Koblenz Alcoa Davenport Works Kaiser Trentwood Works Constellium Rhenalu	AMS-QQ-A-250/4
2024	O	0.129 - 0.249	Alcoa Davenport Works Kaiser Trentwood Works Constellium Rhenalu	AMS-QQ-A-250/4
2024 MRS	O	0.021 - 0.125	Alcoa Davenport Works Kaiser Trentwood Works	AMS-QQ-A-250/4 CMMP019
2024 MRS	O	0.126 - 0.249	Alcoa Davenport Works Kaiser Trentwood Works	AMS-QQ-A-250/4
2024 Fine Grain	O	Sheet/ coil	Kaiser Trentwood Works	AMS-QQ-A-250/4 CMMP021
2024 Fine Grain	O	0.010 - 0.249	AMAG Rolling	AMS-QQ-A-250/4 CMMP021
2024	T3	0.008 - 0.009	Alcoa Davenport Works Kaiser Trentwood Works	AMS-QQ-A-250/4 CMMP019
2024	T3	0.010 - 0.020	Alcoa Davenport Works Kaiser Trentwood Works Aleris Aluminum Koblenz AMAG Rolling	AMS-QQ-A-250/4 CMMP019
2024	T3	0.021 - 0.125	Alcoa Davenport Works Kaiser Trentwood Works Constellium Rhenalu AMAG Rolling Aleris Aluminum Koblenz	AMS-QQ-A-250/4 CMMP019
2024	T3	0.126 - 0.128	Alcoa Davenport Works Kaiser Trentwood Works Constellium Rhenalu AMAG Rolling Aleris Aluminum Koblenz	AMS-QQ-A-250/4

Table I (Continued)
Qualified Producers List for Sheet Material

Alloy (Note 1)	Temper	Thickness (in)	Qualified Producers	Specifications
2024	T3	0.129-0.190	AMAG Rolling	AMS-QQ-A-250/4
2024	T3	0.129 - 0.249	Alcoa Davenport Works Kaiser Trentwood Works Constellium Rhenalu	AMS-QQ-A-250/4
2024 EF Coil	T3	≤ 0.125	Kaiser Trentwood Works	AMS-QQ-A-250/4 CMMP019
2024 MRS	T3	0.021 - 0.125	Alcoa Davenport Works Kaiser Trentwood Works	AMS-QQ-A-250/4 CMMP019
2024 MRS	T3	0.126 - 0.249	Alcoa Davenport Works Kaiser Trentwood Works	AMS-QQ-A-250/4
2024	T4	0.010 - 0.125	Alcoa Davenport Works Kaiser Trentwood Works Constellium Rhenalu	AMS-QQ-A-250/4 CMMP019
2024	T4	0.126 - 0.249	Alcoa Davenport Works Kaiser Trentwood Works Constellium Rhenalu	AMS-QQ-A-250/4
2024	T4 T-Form	0.020 - 0.080	Kaiser Trentwood Works	CMMP020
Alclad 2024	O	0.008 - 0.009	Alcoa Davenport Works Kaiser Trentwood Works AMAG Rolling	AMS-QQ-A-250/5 CMMP019
Alclad 2024	O	0.010 - 0.062	Alcoa Davenport Works Kaiser Trentwood Works AMAG Rolling Aleris Aluminum Koblenz Constellium Rhenalu	AMS-QQ-A-250/5 CMMP019
Alclad 2024	O	0.063 - 0.125	Alcoa Davenport Works Kaiser Trentwood Works AMAG Rolling Aleris Aluminum Koblenz Constellium Rhenalu	AMS-QQ-A-250/5 CMMP019
Alclad 2024	O	0.126 - 0.128	Aleris Aluminum Koblenz Alcoa Davenport Works Kaiser Trentwood Works Constellium Rhenalu AMAG Rolling	AMS-QQ-A-250/5

Table I (Continued)
Qualified Producers List for Sheet Material

Alloy (Note 1)	Temper	Thickness (in)	Qualified Producers	Specifications
Alclad 2024	O	0.129 - 0.249	Alcoa Davenport Works Kaiser Trentwood Works Constellium Rhenalu AMAG Rolling	AMS-QQ-A-250/5
Alclad 2024 Fine Grain	O	Sheet/ coil	Kaiser Trentwood Works AMAG Rolling Constellium Rhenalu	AMS-QQ-A-250/5 CMMP021
Alclad 2024	T3	0.008 - 0.009	Alcoa Davenport Works Kaiser Trentwood Works	AMS-QQ-A-250/5 CMMP019
Alclad 2024	T3	0.010 - 0.125	Alcoa Davenport Works Kaiser Trentwood Works Aleris Aluminum Koblenz Constellium Rhenalu AMAG Rolling	AMS-QQ-A-250/5 CMMP019
Alclad 2024	T3	0.126 - 0.128	Alcoa Davenport Works Kaiser Trentwood Works Aleris Aluminum Koblenz Constellium Rhenalu AMAG Rolling	AMS-QQ-A-250/5
Alclad 2024	T3	0.129 - 0.249	Alcoa Davenport Works Kaiser Trentwood Works Constellium Rhenalu	AMS-QQ-A-250/5
Alclad 2024 EF Coil	T3	$\leq$ 0.125	Kaiser Trentwood Works	AMS-QQ-A-250/5 CMMP019
Alclad 2024	T4	0.010 - 0.125	Alcoa Davenport Works Kaiser Trentwood Works	AMS-QQ-A-250/5 CMMP019
Alclad 2024	T4	0.126 - 0.128	Alcoa Davenport Works Kaiser Trentwood Works	AMS-QQ-A-250/5
Alclad 2024	T4 T-Form	0.020 - 0.080	Kaiser Trentwood Works	CMMP020
Alclad 2024 MRS	T3	0.010-0.062	AMAG Rolling	AMS-QQ-A-250/5
Alclad 2024 MRS	T3	0.010 - 0.125	Kaiser Trentwood Works	AMS-QQ-A-250/5 CMMP019
Alclad 2024 MRS	T3	0.126 - 0.249	Kaiser Trentwood Works	AMS-QQ-A-250/5

Table I (Continued)
Qualified Producers List for Sheet Material

Alloy (Note 1)	Temper	Thickness (in)	Qualified Producers	Specifications
2524	T3	0.020 - 0.125	Alcoa Davenport Works	CMMP008
Alclad 2524	T3	0.020 - 0.125	Alcoa Davenport Works	CMMP008
6013	T4	0.020 - 0.125	Alcoa Davenport Works	AMS 4347 CMMP018
6013 MRS	T4	0.080 - 0.100	Alcoa Davenport Works	AMS 4347 CMMP018
6013	T6	0.010 - 0.062	Alcoa Davenport (PCD-02)	CMMP018
6013	T6	0.063 - 0.125	Alcoa Davenport (PCD-02)	CMMP018
6022	T4	0.020 - 0.063	Alcoa Davenport Works	CMMP017
6061	O	0.006 - 0.009	Alcoa Davenport Works Kaiser Trentwood Works	AMS 4025 (Note 2) CMMP019
6061	O	0.010 - 0.125	Alcoa Davenport Works Kaiser Trentwood Works AMAG Rolling	AMS 4025 (Note 2) CMMP019
6061	O	0.126 - 0.249	Alcoa Davenport Works Kaiser Trentwood Works AMAG Rolling	AMS 4025 (Note 2)
6061/ Fine Grain	O	Sheet/ Coil	Kaiser Trentwood Works AMAG Rolling	AMS 4025 (Note 2) CMMP021
6061	T4	0.006 - 0.125	Alcoa Davenport Works Kaiser Trentwood Works	AMS 4026 (Note 3) CMMP019
6061	T4	0.021-0.125	AMAG Rolling	AMS 4026
6061	T4	0.126 - 0.249	Alcoa Davenport Works Kaiser Trentwood Works	AMS 4026 (Note 3)
6061	T6	0.006 - 0.009	Alcoa Davenport Works Kaiser Trentwood Works	AMS 4027 (Note 4) CMMP019
6061	T6	0.010 - 0.125	Alcoa Davenport Works Kaiser Trentwood Works AMAG Rolling	AMS 4027 (Note 4) CMMP019
6061	T6	0.126 - 0.249	Alcoa Davenport Works Kaiser Trentwood Works AMAG Rolling	AMS 4027 (Note 4)
7075	O	0.015 - 0.039	Alcoa Davenport Works Kaiser Trentwood Works	AMS-QQ-A-250/12 CMMP019

Table I (Continued)
Qualified Producers List for Sheet Material

Alloy	Temper	Thickness (in)	Qualified Producers	Specifications
7075	O	0.040 - 0.125	Alcoa Davenport Works Kaiser Trentwood Works AMAG Rolling	AMS-QQ-A-250/12 CMMP019
7075	O	0.126 - 0.249	Alcoa Davenport Works Kaiser Trentwood Works	AMS-QQ-A-250/12
7075/ Fine Grain	O	Sheet/ Coil	Kaiser Trentwood Works	AMS-QQ-A-250/12 CMMP021
7075	T6	0.008 - 0.125	Alcoa Davenport Works Kaiser Trentwood Works	AMS-QQ-A-250/12 CMMP019
7075	T6	0.040 - 0.125	AMAG Rolling	AMS-QQ-A-250/12
7075	T6	0.126 - 0.249	Alcoa Davenport Works Kaiser Trentwood Works	AMS-QQ-A-250/12
7075	T73	0.040 - 0.125	Alcoa Davenport Works Kaiser Trentwood Works	AMS-QQ-A-250/12 CMMP019
7075	T73	0.126 - 0.249	Alcoa Davenport Works Kaiser Trentwood Works	AMS-QQ-A-250/12
7075	T76	0.063 - 0.125	Alcoa Davenport Works Kaiser Trentwood Works	AMS-QQ-A-250/24 AMS 4315, CMMP019
7075	T76	0.126 - 0.249	Alcoa Davenport Works Kaiser Trentwood Works	AMS-QQ-A-250/24 AMS4315
Alclad 7075	O	0.008 - 0.039	Alcoa Davenport Works Kaiser Trentwood Works	AMS-QQ-A-250/13 AMS 4048, CMMP019
Alclad 7075	O	0.040 – 0.062	Alcoa Davenport Works Kaiser Trentwood Works AMAG Rolling	AMS-QQ-A-250/13 AMS 4048, CMMP019
Alclad 7075	O	0.063 - 0.125	Alcoa Davenport Works Kaiser Trentwood Works	AMS-QQ-A-250/13 AMS 4048, CMMP019
Alclad 7075	O	0.063 – 0.187	AMAG Rolling	AMS-QQ-A-250/13, AMS 4048
Alclad 7075	O	0.126 - 0.249	Alcoa Davenport Works Kaiser Trentwood Works	AMS-QQ-A-250/13 AMS 4048
Alclad 7075 /Fine Grain	O	Sheet/ coil	Kaiser Trentwood Works	AMS-QQ-A-250/13 AMS 4048, CMMP019
Alclad 7075	T6	0.008 - 0.062	Alcoa Davenport Works Kaiser Trentwood Works	AMS-QQ-A-250/13 AMS 4049, CMMP019
Alclad 7075	T6	0.040 - 0.125	AMAG Rolling	AMS-QQ-A-250/13, AMS 4049
Alclad 7075	T6	0.063 - 0.125	Alcoa Davenport Works Kaiser Trentwood Works Aleris Aluminum Koblenz	AMS-QQ-A-250/13 AMS 4049, CMMP019

Table I (Continued)
Qualified Producers List for Sheet Material

Alloy	Temper	Thickness (in)	Qualified Producers	Specifications
Alclad 7075	T6	0.126 - 0.249	Alcoa Davenport Works Kaiser Trentwood Works	AMS-QQ-A-250/13 AMS 4049
Alclad 7075	T76	0.040 - 0.125	Alcoa Davenport Works Kaiser Trentwood Works	AMS-QQ-A-250/25 AMS 4316, CMMP019
Alclad 7075	T76	0.126 - 0.249	Alcoa Davenport Works Kaiser Trentwood Works	AMS-QQ-A-250/25 AMS 4316
7475	T761	0.040 - 0.062	Alcoa Davenport Works Kaiser Trentwood Works	AMS 4085 CMMP019
7475	T761	0.063 - 0.125	Alcoa Davenport Works Kaiser Trentwood Works	AMS 4085 CMMP019
7475	T761	0.126 - 0.249	Alcoa Davenport Works Kaiser Trentwood Works	AMS 4085
7475/ Fine Grain	O	Sheet/ coil≤ 0.125	Constellium Rhenalu	AMS 4084 CMMP021
Alclad 7475 /Fine Grain	O	Sheet/ coil≤ 0.125	Constellium Rhenalu	AMS 4100 CMMP021

NOTES:

1. MRS: Minimum Residual Stress
2. AMS-QQ-A-250/11 superseded by AMS 4025 for 6061-O.
3. AMS-QQ-A-250/11 superseded by AMS 4026 for 6061-T4, -T42, and T451.
4. AMS-QQ-A-250/11 superseded by AMS 4027 for 6061-T6, T62, and T651.

Table II
Qualified Producers List for Plate Material

Alloy	Temper	Thickness (in)	Qualified Producers	Specifications
2024	O	0.250 - 0.499	Alcoa Davenport Works Kaiser Trentwood Works Constellium Rhenalu (PCD-04)	AMS-QQ-A-250/4
2024	O	0.500 - 1.000	Alcoa Davenport (PCD-02) Constellium Rhenalu (PCD-04)	AMS-QQ-A-250/4
2024	O	1.001 - 3.000	Alcoa Davenport Works Aleris Aluminum Koblenz Kaiser Trentwood Works Constellium Rhenalu	AMS-QQ-A-250/4
2024	O	3.001 - 4.000	Alcoa Davenport Works Constellium Ravenswood Aleris Aluminum Koblenz Constellium Rhenalu	AMS-QQ-A-250/4
2024	T351	0.250 - 0.499	Alcoa Davenport Works Constellium Ravenswood Aleris Aluminum Koblenz Kaiser Trentwood Works Constellium Rhenalu	AMS-QQ-A-250/4
2024	T351	0.500 - 1.000	Alcoa Davenport Works Constellium Ravenswood Aleris Aluminum Koblenz Kaiser Trentwood Works Constellium Rhenalu Alcoa Kitts Green(Europe) AMAG Rolling	AMS-QQ-A-250/4
2024	T351	1.001 - 2.000	Alcoa Davenport Works Constellium Ravenswood Aleris Aluminum Koblenz Kaiser Trentwood Works Constellium Rhenalu Alcoa Kitts Green (Europe) AMAG Rolling	AMS-QQ-A-250/4
2024	T351	2.001 - 3.000	Alcoa Davenport Works Constellium Ravenswood Aleris Aluminum Koblenz Kaiser Trentwood Works Constellium Rhenalu AMAG Rolling	AMS-QQ-A-250/4

Table II (Continued)
Qualified Producers List for Plate Material

Alloy	Temper	Thickness (in)	Qualified Producers	Specifications
2024	T351	3.001 - 4.000	Alcoa Davenport Works Constellium Ravenswood Aleris Aluminum Koblenz Constellium Rhenalu Kaiser Trentwood Works	AMS-QQ-A-250/4
2024 Alclad	T351	0.250 - 0.499	Kaiser Trentwood Works	AMS-QQ-A-250/5
2024 Alclad	O	0.250 - 1.750	Alcoa Davenport Works Constellium Ravenswood	AMS-QQ-A-250/5
2324	T39	0.750 - 1.500	Alcoa Davenport Works	CMMP023
6061	O	0.250 - 3.000	Alcoa Davenport Works Constellium Ravenswood Kaiser Trentwood Works	AMS 4025 (Note 1)
6061	T651	0.250 - 3.000	Alcoa Davenport Works Constellium Ravenswood Kaiser Trentwood Works	AMS 4027 (Note 2)
6061	T651	0.500-3.000	AMAG Rolling	AMS 4027
6061	T651	3.001 - 4.000	Alcoa Davenport Works Constellium Ravenswood Kaiser Trentwood Works AMAG Rolling	AMS 4027 (Note 2)
7050	T7451	$\leq$ 2.000	Alcoa Davenport Works Constellium Ravenswood Kaiser Trentwood Works Aleris Aluminum Koblenz	AMS 4050
7050	T7451	0.250 - 2.000	AMAG Rolling	AMS 4050
7050	T7451	2.001 - 3.000	Alcoa Davenport Works Constellium Ravenswood Kaiser Trentwood Works Aleris Aluminum Koblenz Constellium Rhenalu AMAG Rolling	AMS 4050
7050	T7451	3.001 - 4.000	Alcoa Davenport Works Constellium Ravenswood Kaiser Trentwood Works Aleris Aluminum Koblenz Constellium Rhenalu	AMS 4050
7050	T7451	4.001 - 7.000	Alcoa Davenport Works Kaiser Trentwood Works Aleris Aluminum Koblenz	AMS 4050
7050	T7451	7.001 - 8.000	Alcoa Davenport Works Kaiser Trentwood Works	AMS 4050

Table II (Continued)
Qualified Producers List for Plate Material

Alloy	Temper	Thickness (in)	Qualified Producers	Specifications
7050	T7651	0.250 - 1.000	Alcoa Davenport Works Aleris Aluminum Koblenz Kaiser Trentwood Works	AMS 4201
7050	T7651	1.001 - 2.000	Alcoa Davenport Works Constellium Ravenswood	AMS 4201
7050	T7651	2.001 - 2.500	Alcoa Davenport Works Constellium Ravenswood Kaiser Trentwood Works	AMS 4201
7050	T7651	2.501 - 3.000	Alcoa Davenport Works Constellium Ravenswood Kaiser Trentwood Works Aleris Aluminum Koblenz	AMS 4201
7050	T7651	3.001-3.250	Kaiser Trentwood Works	AMS 4201
7050	T7651	3.001 - 4.000	Alcoa Davenport Works Aleris Aluminum Koblenz Constellium Ravenswood Alcoa Kitts Green (Europe)	CMMP010
7050	T7651	4.001 - 5.000	Alcoa Davenport Works Constellium Rhenalu Constellium Ravenswood Aleris Aluminum Koblenz (PCD-03) Kaiser Trentwood Works	CMMP010
7075	0	0.250 - 3.000	Kaiser Trentwood Works	AMS-QQ-A-250/12
7075	T651	0.250 - 3.000	Kaiser Trentwood Works	AMS-QQ-A-250/12
7075	T651	0.500 – 4.000	AMAG Rolling	AMS-QQ-A-250/12
7075	T7351	0.250 - 0.500	Alcoa Davenport Works Constellium Ravenswood Aleris Aluminum Koblenz Kaiser Trentwood Works Constellium Rhenalu	AMS-QQ-A-250/12
7075	T7351	0.500 – 1.000	AMAG Rolling	AMS-QQ-A-250/12
7075	T7351	0.501 - 1.000	Alcoa Davenport Works Constellium Ravenswood Aleris Aluminum Koblenz Kaiser Trentwood Works Constellium Rhenalu Alcoa Kitts Green(Europe)	AMS-QQ-A-250/12

Qualified Producers List for Plate Material

Alloy	Temper	Thickness (in)	Qualified Producers	Specifications
7075	T7351	1.001 - 2.000	Alcoa Davenport Works Constellium Ravenswood Aleris Aluminum Koblenz Kaiser Trentwood Works Constellium Rhenalu Alcoa Kitts Green(Europe) AMAG Rolling	AMS-QQ-A-250/12
7075	T7351	2.001 - 3.000	Alcoa Davenport Works Constellium Ravenswood Aleris Aluminum Koblenz Kaiser Trentwood Works Constellium Rhenalu Alcoa Kitts Green(Europe) AMAG Rolling	AMS-QQ-A-250/12
7075	T7351	3.001 - 3.500	Alcoa Davenport Works Constellium Ravenswood Aleris Aluminum Koblenz Constellium Rhenalu Kaiser Trentwood Works AMAG Rolling	AMS-QQ-A-250/12
7075	T7351	3.501 - 4.000	Alcoa Davenport Works Constellium Ravenswood Aleris Aluminum Koblenz Constellium Rhenalu Kaiser Trentwood Works	AMS-QQ-A-250/12
7075	T7351	4.001 - 5.000	Alcoa Davenport Works Constellium Ravenswood (PCD-01) Kaiser Trentwood works	CMMP030
7075	T7651	0.250 - 0.499	Kaiser Trentwood Works Alcoa Davenport Works Constellium Ravenswood	AMS-QQ-A-250/24 AMS4315
7075	T7651	0.500 - 1.000	Alcoa Davenport Works Constellium Ravenswood	AMS-QQ-A-250/24 AMS4315
7075	T7651	1.001 - 2.000	Alcoa Davenport Works Kaiser Trentwood Works Constellium Ravenswood	AMS-QQ-A-250/24 AMS4315
7150	T7751	0.250 - 3.000	Alcoa Davenport Works	AMS 4252

Table II (Continued)
Qualified Producers List for Plate Material

Alloy	Temper	Thickness (in)	Qualified Producers	Specifications
7475	T7351	0.250 - 1.300	Alcoa Davenport Works	AMS 4202
7475	T7351	0.250 - 1.500	Aleris Aluminum Koblenz Kaiser Trentwood Works	AMS 4202
7475	T7351	1.501 - 2.000	Alcoa Davenport Works Aleris Aluminum Koblenz Kaiser Trentwood Works	AMS 4202
7475	T7351	2.001 - 2.500	Alcoa Davenport Works Kaiser Trentwood Works Aleris Aluminum Koblenz	AMS 4202
7475	T7351	2.501 - 3.000	Alcoa Davenport Works Constellium Ravenswood Aleris Aluminum Koblenz Kaiser Trentwood Works	AMS 4202
7475	T7351	3.001 - 4.000	Alcoa Davenport Works Aleris Aluminum Koblenz Constellium Rhenalu Kaiser Trentwood Works	AMS 4202

NOTES:

1. AMS-QQ-A-250/11 superseded by AMS 4025 for 6061-O.
2. AMS-QQ-A-250/11 superseded by AMS 4027 for 6061-T6, T62, and T651.

Table III
Qualified Producer Facility Addresses

Alcoa Kitts Green (Europe)
Flat Rolled Products
P.O. Box 383,Kitts Green Road,
Kitts Green, Birmingham,
B33 9QR, England

Alcoa Davenport Works
4879 State St, Bettendorf,
IA 52722

Constellium Ravenswood (formerly ALCAN Ravenswood)
Ravenswood Operations
P.O. Box 98
Ravenswood, WV 26164

Aleris Aluminum Koblenz GmbH (formerly Corus Aluminium Walzprodukte or Hoogovens Aluminum Walzprodukte)
Carl-Spaeter-Strasse 10
Postfach 100331
D-56070 Koblenz, Germany

Kaiser Aluminum (Trentwood Works)
P.O. Box 15108
Trentwood Works
Spokane, Washington 99215

Constellium Rhenalu (formerly ALCAN Rhenalu)
Zone Industrielle Des Listes
BP 42 - 63502
Issoire, France

AMAG Rolling (formerly Ranshofen Aluminum Walzwerk GmbH)
P.O.B 32
A-5282 Ranshofen, Austria