



N° DEPOTS	N° BON DE LIVRAISON	N° CLIENT	REPRESENTANT 1	DATE	N° COMMANDE	FOLIO
5	45	523160	13488 MAURY L	03/01/2022	523160	01

LIVRAISON SCHENKER 72 HEURES
DEPART : 03/01/2022 TEL.CLIENT 01.34.47.15.00 ZONE: 45
ARRIVEE: 06/01/2022
AERTEC ZAC RAMASSIERS 3AL A.MAILLOL
31770 COLOMIERS

MODE D'EXPEDITION	REFERENCES COMMANDE CLIENT
V5 / B3 REFACTURE	AC21/01308

Zone d'activité PARWEST
B. P. 52, 78311 MAUREPAS CEDEX
Tél. : 01.30.69.67.00 Fax. : 01.30.50.93.46
R.C. VERSAILLES B 562.068.155 - SIRET 562.068.155 00026
TVA FR 30 562 068 155 - TELEX 696876 F

Identification INTRACOM : FR65437937493

AERTEC SAS

3 RUE DU GRAND PUIITS

95380 VILLERON

ZONE	CAMION	LIGNE
45	0000	

HEURE D'EDITION
14512353

BON DE LIVRAISON

BR 22/00018



N° LIGNE	DESIGNATION	QUANTITE		NOMBRE		OBSERVATIONS	N° CELL	NO. COULEE	PREPARATEURS	
		UNITE	POIDS	COUPEBARRE					C	P
01	2024 T3 PLAQUEE "AERO" SANS CAHIER DES CHARGES M 0.50 1250 2500 ER		1 PIECES			***** TYPE CA : 7 *****	01	712364B9 712364B9	***** 478 *****	***** 478 *****
02	2024 T3 PLAQUEE "AERO" SANS CAHIER DES CHARGES M 0.80 1250 2500 ER		1 PIECES			***** TYPE CA : 7 *****	01	731329B9 731329B9	***** 478 *****	***** 478 *****
03	2024 T3 PLAQUEE "AERO" SANS CAHIER DES CHARGES M 1 1250 2500 ER		1 PIECES			***** TYPE CA : 7 *****	01	736790B7 736790B7	***** 478 *****	***** 478 *****
04	2024 T3 PLAQUEE "AERO" SANS CAHIER DES CHARGES M 1.20 1250 2500 ER		1 PIECES			***** TYPE CA : 7 *****	01	737384B8 737384B8	***** 478 *****	***** 478 *****
	* CA PERSONNALISE *****					CA PERSONNALISE *****		PERSONNALISE	*****	CA

CA FAIT

CA FAIT

Déclaration de Conformité/Déclaration of Conformity
(NF EN ISO CEI 17050-1 et NFL 00 015C)
Nous déclarons que la fourniture citée est conforme aux exigences du contrat et que, après vérifications et essais, elle répond en tout point, aux exigences spécifiées, aux normes et règlements applicables, sauf exceptions, réserves ou dérogations énumérées dans la présente déclaration de conformité :
We hereby declare, barring exceptions, reservations, or exemptions listed in this statement of conformity that the listed supplies comply with the contract requirements and that, after completion of testing and verification, they completely satisfy all specified requirements, and applicable standards and regulations:

Frederic Barban
Directeur Qualité

TOTAL FOLIO		
DATE	NBRE COLIS	POIDS TOTAL
	1	31,80
TOTAL COMMANDE		
	1	99,90

le 07/01/2022
ACT

Nuance : 2024 T3 PLAQUEE
Coulee : 712364B9 lot : 712364B9
Commande : BL :523160 Poste:01
Client : AERTEC SAS
AC21/01308



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KAISER
ALUMINUM
FABRICATED PRODUCTS

CERTIFIED TEST REPORT

<http://Online.KaiserAluminum.com>

Kaiser Aluminum
Trentwood Works
PO Box 15108 Spokane Valley WA 99215-5108
15000 E Euclid
Spokane Valley, WA 99216
(800) 367-2586

CUSTOMER PO NUMBER:	WORK PACKAGE:	CUSTOMER PART NUMBER:	SHIP RUN/LOAD:	GOVT CONTRACT NUMBER:
664859-01	2018-ALU-KAI-138	2018-862452	164271/1	
KAISER ORDER NUMBER:	SHIP DATE:	ALLOY:	GRADE:	TEMPER:
1257613-1	05/04/2018	2024	ALC1A1	T3
WEIGHT SHIPPED:	QUANTITY:	TRUCK DL #:	Gauge:	DIAMETER/WIDTH:
7150 LB	719 PCS EST.	2073589	0.0000 MM	1250.0 MM
SHIP TO:	SOLE TO:			
THYSSENKRUPP MATERIAL FRANCE	THYSSENKRUPP MATERIALS FRANCE			
RUE FRANCOIS ARAGO	6, AVENUE GUTENBERG			
BOURGES, 18000 FR	Z.A. PARIWEST			
	CS 40509			
	MALREPAS, 78317 FR			

MHU 2223216: LOT 712364B9 : 50 pieces
LOT 712364B9: 100 pieces
LOT 712364B6: 100 pieces
LOT 712364B7: 19 pieces
MHU 2223870: LOT 26532834: 100 pieces
LOT 712364B7: 100 pieces
LOT 712364B5: 100 pieces
LOT 712364B3: 100 pieces
LOT 712364B1: 42 pieces

Certified Specifications

AMS 5044/Rev5-ALMS 01-04-000/Rev3-ALMS 01-04-014/Rev2-ATP 9848-110/Rev1-AMS-QQ A-250/5/Rev1-AMS 1462/RevA-ASH-A3012/RevX-ASTM B 209/Rev14-BAEN 1002/Rev2-BS 1, 100/Rev5-BS 1, 100/Rev1-DAN 424/Rev1280-DIN 29 546/Rev13-LN 9073/Rev2002/Amc1-507-1009/Rev1/Amc1-WL 3, 1364/Rev1

Test Code 2306

Test Results:

Plant Serial: 46093.3
Kaiser Order Number: 1013610
Line Item: 1

Page 2 of 11

Nuance : 2024 T3 PLAQUEE
 Coulee : 712364B9 lot : 712364B9
 Commande : BL :523160 Poste:01
 Client : AERTEC SAS
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 15000 E Euclid
 Spokane Valley, WA 99216
 (800) 367-2586
 LOT: 26693253 CAST: 645 DROP: 27 INGOT: 3

Melted in USA
 (ASTM B2/B217)
 (EN 2007-1)

Tensile: Temp:	Dir/Temp:	Ultimate XSI (MPa)	Yield XSI (MPa)	Elongation %
T3	10 / 05 (Min:Max)	60.2 : 61.2 (433 : 420)	42.6 : 42.7 (294 : 234)	13.8 : 14.4

(EN 2007)
 Clad Diffusion: 30 %

(ASTM B210)
 (EN 2018)
 TGG: 100%

(AMS 2035)
 (EN 2007)
 Coating: 1.5 % (Samp-1) 5.4 % (Samp-2)

Chemical	ST	FE	CU	MN	MG	CR	ZN	TI	V	SR	OTHER
Actual	0.05	0.21	4.5	0.15	1.4	0.00	0.09	0.02	0.01	0.00	TOT 0.32

Plant Serial: 0589013
 Kaiser Order Number: 1257613
 Ship Item: 1

Page 2 of 3

Nuance : 2024 T3 PLAQUEE
 Coulee : 712364B9 lot : 712364B9
 Commande : BL :523160 Poste:01
 Client : AERTEC SAS
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 15000 E Euclid
 Spokane Valley, WA 99216
 (800) 367-2586

LOT: 712360B7 CAST: 645 DROP: 27 INCOIT: 3 Parent Lot: 266932B3

Melted in USA
 (ASTM B37/B37M)

(EN 2004-1)

Temper	Dir/# Tests	Ultimate TSI (MPa)	Yield KSI (MPa)	Elongation %
T3	LT / 03 (Min:Max)	51.4 : 62.1 (423 : 478)	42.3 : 43.0 (292 : 296)	13.6 : 16.0

(EN 2004)

Clad Diffusion: 08%

(ASTM B110)

(EN 2716)

PCB: PAGE

(AMS 2300)

(EN 2007)

Cladding: 5.3 % (Samp: 1) 5.4 % (Samp: 2)

(ASTM B209)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.05	0.21	4.5	0.53	1.4	0.00	0.09	0.02	0.01	0.30	TOT 0.62

Plant Serial: 4508812
 Material Order Number: 1337332
 Line Item: 1

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Nuance : 2024 T3 PLAQUEE
 Coulee : 712364B9 lot : 712364B9
 Commande : BL :523160 Poste:01
 Client : AERTEC SAS
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 Spokane Valley, WA 99216
 (800) 367-2586

LOT: 712351B5 CAST: 645 DROP: 27 INGOT: 3 Parent Lot: 256932B3

Melted in USA

(ASTM B8/5557)

(EN 2000-3)

Tensile: Temp	Dir./#Tests	Ultimate KSI (MPa)	Yield KSI (MPa)	Elongation %
T3	LT / 02 (Min:Max)	61.2 : 62.1 (422 : 431)	42.6 : 43.8 (294 : 302)	13.8 : 15.1

(EN 1057)

Clad Diffusion: 3R %

(ASTM G110)

(EN 2216)

INC:

FACS

(AMS 2353)

(EN 2007)

Cladding:

5.3 % (Samp-1) 5.4 % (Samp-2)

(ASTM F1257)

Chemistry:	SI	FE	CU	MN	MG	CA	ZN	TI	V	ZR	OTHER
Actual	0.08	0.21	0.5	0.53	1.4	0.02	0.09	0.02	0.01	0.05	0.02

Plate Serial: 6509813

Kaiser Order Number: 1257413

Line Item: 1

Page 1 of 1

Nuance : 2024 T3 PLAQUEE
 Coulee : 712364B9 lot : 712364B9
 Commande : BL :523160 Poste:01
 Client : AERTEC SAS
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 15000 E Euclid
 Spokane Valley, WA 99216
 (800) 367-2586

Lot: 712362B3 CAST: 645 DROP: 27 INGOT: 3 Parent lot: 266932H3

Melted in USA
 (ASTM B8/B857)

(EN 2002-1)

Tensile: Temper	Dir/Tests	Ultimate KSI (MPa)	Yield KSI (MPa)	Elongation %
T3	LT / 02 (Min:Max)	61.5 : 62.2	42.2 : 43.2	13.0 : 15.6
		(424 : 429)	(291 : 296)	

(EN 2007)

Clad Diffusion: 38

(ASTM G110)

(EN 2716)

IGC: PASS

(AMS 2100)

(EN 2137)

Cladding: 5.3 % (Samp-1) 5.4 % (Samp-2)

(ASTM B1251)

Chemistry:	SI	FE	CU	MN	VO	CR	ZN	TI	V	ZR	OTHER
Actual	0.05	0.21	4.5	0.53	1.4	0.06	0.03	0.02	0.11	0.00	TOT 0.02

Plant Serial: 450103

Kaiser Order Number: 450103

Line Item:

Page 3 of 13

Nuance : 2024 T3 PLAQUEE
 Coulee : 712364B9 lot : 712364B9
 Commande : BL :523160 Poste:01
 Client : AERTEC SAS
 AC21/01308



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 Spokane Valley, WA 99216
 (800) 367-2586

LOT: 712363B1 CAST: 645 DROP: 27 INGOT: 3 Parent Lot: 266932B3

Melted in USA
 (ASTM B2/1557)

(EN 2092-1)
 Tensile: Tensile Dir./Tests Ultimate KSI (MPa) Yield KSI (MPa) Elongation %
 T3 LT / 02 (Min:Max) 60.0 : 61.5 41.7 : 42.2 13.0 : 13.8
 (414 : 424) (286 : 291)

(EN 2007)
 Clad Diffusion: 36 %

(ASTM G170)
 (EN 2716)
 ICC: PASS

(AMS 2355)
 (EN 2007)
 Cladding: 5.2 % (Temp-1) 5.4 % (Temp-2)

(ASTM B1251)
 Chemistry: Si Fe Cu Mn Mg Zn Ti V Zr OTHER
 Actual: 0.05 0.21 4.5 0.53 1.4 0.00 0.08 0.02 0.00 0.00 0.00 0.00

Plant Serial: 4599317
 Kaiser Order Number: 120713
 Line Item: 1

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Nuance : 2024 T3 PLAQUEE
 Coulee : 712364B9 lot : 712364B9
 Commande : BL :523160 Poste:01
 Client : AERTEC SAS
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 15000 E Euclid
 Spokane Valley, WA 99216
 (800) 367-2596

LOT: 712364B9 CAST: 645 DROP: 27 INGOT: 3 Parent Lot: 266932H3

Melted in USA

(ASTM B2/B2.2)

(EN 2002-1)

Temper	Eligibility	Ultimate KSI (MPa)	Yield KSI (MPa)	Elongation %
T3	LI / 02 (Min:Max)	66.0 : 67.2 (414 : 422)	41.6 : 41.9 (25.1 : 260)	13.6 : 14.7

(EN 2007)

Class Diffusion: PASS

(ASTM B110)

(EN 2716)

TGC: PASS

(AMS 2350)

(EN 2007)

Cladding: 5.3 3 (Samp-1) 5.4 3 (Samp-2)

(ASTM B1391)

Chemistry:	SI	FE	CU	MN	NI	CR	AN	TI	V	ZR	OTHER
Actual	0.05	0.02	4.5	0.02	1.4	0.00	0.09	0.02	0.01	0.05	0.02

Plant Serial: 450013

Kaiser Order Number: 237613

Line Item: 1

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Nuance : 2024 T3 PLAQUEE
 Coulee : 712364B9 lot : 712364B9
 Commande : BL :523160 Poste:01
 Client : AERTEC SAS
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 15000 E Euclid
 Spokane Valley, WA 99216
 (800) 367-2586

LOT: 712365B6 CASE: 645 DROP: 27 INGOT: 3 Parent Lot: 266932B3

Melted in USA
 (ASTM B3/B557)
 (EN 2002-1)

Tensile: Temp	Dir/Tests	Ultimate KSI (MPa)	Yield KSI (MPa)	Elongation %
RT	LT / 01 (Min:Max)	59.7 : 59.7 (412 : 412)	41.0 : 41.0 (283 : 283)	15.2 : 15.2

(EN 2007)
 Clad Diffusion: 38 %

(ASTM B113)
 (EN 2416)
 ISO: EAFN

(AMS 2355)
 (EN 2007)
 Cladding: 5.3 % (Samp-1) 5.6 % (Samp-2)

(ASTM B1254)	Chemistry:	Si	Fe	Cu	Mn	Mg	Cr	Al	Ti	V	Zr	OTHER
Actual		0.05	0.21	4.5	0.43	1.4	0.00	0.09	0.02	0.01	0.00	201 0.02

Plant Serial: 4589313
 Kaiser Order Number: 1257513
 Line Item: 1

Page 3 of 11

Nuance : 2024 T3 PLAQUEE
 Coulee : 712364B9 lot : 712364B9
 Commande : BL :523160 Poste:01
 Client : AERTEC SAS
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 1500C E Euclid
 Spokane Valley, WA 99216
 (800) 367-2586

LOT: 712366B4 CAST: 645 DROF: 27 INGOT: 3 Parent Lot: 266932B3

Melted in USA
 (ASTM B5/B557)
 (EN 2002-1)

Tensile: Temped	Dir/#Tests	Ultimate KSI (MPa)	Yield KSI (MPa)	Elongation %
T3	01 / 02 (Min:Max)	60.7 : 64.6 (419 : 425)	42.5 : 44.2 (293 : 305)	14.0 : 17.0

(EN 2007)
 Grain Disposition: 30 %

(ASTM G113)
 (EN 2716)
 TCC: PASS

(AMS 2335)
 (EN 2007)
 Cladding: 5.3 % (Samp-1) 0.4 % (Samp-2)

(ASTM B251)												
Chemistry:	SI	FE	CU	MN	MG	CP	ZN	TI	V	SR		OTHER
Actual	0.05	0.21	4.5	0.53	1.4	0.00	0.09	0.02	0.01	0.00	101	0.02

Chemistry:		SI	FE	CU	MN	MG	CP	ZN	TI	V	SR	OTHER
2024	MIN	0.00	0.00	3.8	0.00	1.2	0.00	0.00	0.00	0.00	0.00	MAX 0.00
	MAX	0.50	0.50	4.9	0.5	1.8	0.10	0.25	0.15	0.05	0.05	101 0.10
ETHER	MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	MAX 0.00
1050	MAX	0.25	0.10	0.05	0.05	0.05	0.03	0.05	0.03	0.03	0.03	101 0.10

Aluminum Remainder

Plant Serial : 4820407
 Kaiser Order Number : 1257643
 Page 1 of 1

Nuance : 2024 T3 PLAQUEE
Coulee : 712364B9 lot : 712364B9
Commande : BL :523160 Poste:01
Client : AERTEC SAS
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15000 F Euclid
Spokane Valley, WA 99216
(800) 367-2586

Miscellaneous Notes

UNLESS SPECIFICALLY REQUESTED OTHERWISE ON THE ORDER, THE DIMENSIONAL TOLERANCES ARE CERTIFIED TO MEET THE TOLERANCE REQUIREMENTS OF IN 9073 OR AISI 5044 GENERAL TOLERANCES, AS APPLICABLE. FOR ALCLAD 2024 TEMPER, 1.6MM SHEET IS NOT EQUIVALENT TO .063", DUE TO LAYER THICKNESS AND TENSILE PROPERTY DIFFERENCES FOR THE RESPECTIVE PRODUCTS.

ELONGATION RESULTS ARE BASED UPON A 50 mm GAUGE LENGTH FOR PRODUCT THICK THAN 12.5 mm THICK.

Diffusion Test (EN 2007) (Reagent Used: Keller's A&B; Magnification: 313X; Sample Location: Head of the lot)

PH Test (ASTM B110, EN 2767) (Reagent Used: 50g NaCl + 10ml Hydrogen Peroxide in 1l of DI Water (Reagent solution) 5% Nitric Acid + 0.5% Hydrofluoric Acid in DI Water (Reagent); Magnification: 313X; Sample Location: Head of the lot)

Linear Thickness Test (AMS 2355, EN 2007) (Reagent Used: 0.5% Hydrofluoric Acid or Keller's A&B; Magnification: 313X; Sample Location: Head and tail of the lot, edge-center edge averaged for each)

Metal represented by this test report meets the requirements of the appropriate specifications indicated, and all Airbus quality requirements. For AIRBUS applications, Kaiser Aluminum's Airbus Approval Number is: 100758. This order is in furtherance of an Airbus UK order.

Plant Serial: 4508313
Kaiser Order Number: 1257613
Line Item: 1

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Nuance : 2024 T3 PLAQUEE
Coulee : 712364B9 lot : 712364B9
Commande : BL :523160 Poste:01
Client : AERTEC SAS
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CERTIFICATION

Kaiser Aluminum, Trentwood Works, is ISO 9001, AS9100, and ISO 14001 certified, and hereby certifies that all material shipped under this order: has been inspected, tested, and found to be in conformance with the requirements of the specifications indicated herein. All test equipment and measuring devices are calibrated and certified in accordance applicable specifications. For material thicknesses outside specification limits, mechanical properties are as shown herein and chemical composition meets specification requirements. Reported elongation values have been achieved as elongation at fracture. Material is produced in the United States of America or a qualifying country per DEAE 225.842-11a1, was manufactured in the United States of America, and meets the requirements of DEAE 232.221 for domestic content. Material has been thermally processed in conformance with AMS 2773, where applicable. Material is mercury free, within the limits of detection of ASTM B1215 (50ppm). Material is compliant with RoHS 2, European Union Directive 2011/65/EU. Material is in compliance with European Chemical Agency, REACH, SVHC regulations, EEC No 1907/2006, and Kaiser regularly monitors these regulations for updates. Material is free of Conflict Minerals, as defined in Section 15.2 of the Dodd-Frank Act. Material is free of weld repairs. Material meets the reporting requirements of EN16234, Type 3.1. Any warranty is limited to that shown on Kaiser Aluminum's standard general terms and conditions of sale. Test reports are on file, subject to examination. Test reports shall not be reproduced except in full, without the written approval of the Kaiser Aluminum Laboratory. The recording of false, fictitious or fraudulent statements or entries on this certificate may be punished as a felony under Federal law.

JAMES HEMENWAY, LABORATORIES SUPERVISOR

Plant Serial: 4009511

Kaiser Order Number: 120613

Page 11 of 11

Line Item: 1