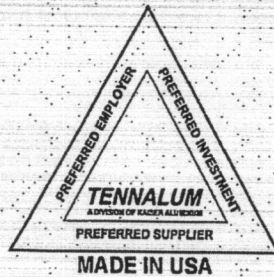


# KAISER ALUMINUM FABRICATED PRODUCTS

Tennalum  
309 Industrial Drive  
Jackson, TN 38301  
731-423-2811



## CERTIFIED TEST REPORT

<https://Online.KaiserAluminum.com>

CUSTOMER PO NUMBER: M60056864-1		CUSTOMER PART NUMBER: 42448		PRODUCT DESCRIPTION: Cold Finished Round	
KAISER ORDER NUMBER: 749252	LINE ITEM: 1	SHIP DATE: 02/18/2022	ALLOY: 2024	TEMPER: T351	
WEIGHT SHIPPED: 240 lbs.	QUANTITY: 21 pcs.	B/L NUMBER: 46964	DIAM/DAF/THKNS: 1.000 in.	WIDTH: 0.000 in.	LENGTH: 144.0 in.
SHIP TO:  TW Metals, Inc. 27 Englehard Drive Monroe TWP, NJ 08831 USA			SOLD TO:  TW Metals, Inc. The Arboretum, Suite 204 760 Constitution Drive Exton, PA 19341 USA		

Test Code: 1000 AC

### Actual Physical Properties

Lot Number	LONG. UTS ksi	LONG. YTS ksi	LONG. ELONG. %
20271938	69.7	53.9	21.0

### Chemical Composition, WT. % (Aluminum Remainder)

	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	OTHERS EACH	OTHERS TOTAL	Lot
Actual	0.08	0.26	4.7	0.75	1.3	0.01	0.09	0.02			20271938
Max	0.50	0.50	4.9	0.9	1.8	0.10	0.25	0.15	0.05	0.15	
Min			3.8	0.30	1.2						

### Specifications

ISO 9001, ASTM B211-19, AMS 4120S, AMS-QQ-A-225/6B, CPPP-2000 Rev 0 Exc. dtd 5/3/21

TW METALS  
TEST CERTIFICATE CHECKED  
Sig: *[Signature]*  
Date: 25/10/2023

"MATERIAL HAS BEEN CONTROLLED TO LCS  
PER MCL MANUAL F-17 BY TW METALS"

SIGNED *[Signature]* DATE 3/16/2022

TW METALS  
PTZKU  
MAR 03 2022  
REPORTS

ACCEPTED BY *[Signature]*

### CERTIFICATION

Kaiser Aluminum Fabricated Products, LLC ("Kaiser") hereby certifies that the metal shipped under this order has been inspected and tested and found in conformance with the applicable specifications forming a part of the description set forth in Kaiser's sales acknowledgement form. Any warranty is limited to that shown on Kaiser's general terms and conditions of sale. Test reports are on file, subject to examination.

John Rennekamp, Quality Manager

*[Signature]*

Plant Serial: 293443

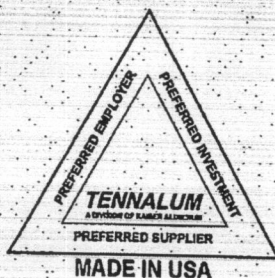
Kaiser Order Number: 749252

Line Item: 1

# **KAISER ALUMINUM**

**FABRICATED PRODUCTS**

Tennalum  
309 Industrial Drive  
Jackson, TN 38301  
731-423-2811



## **CERTIFIED TEST REPORT**

<https://Online.KaiserAluminum.com>

### **Miscellaneous Notes**

Made in USA

This material was melted and manufactured in the USA. Mercury is not a normal contaminant in aluminum alloys. Neither mercury nor any of its compounds were utilized by Kaiser Aluminum in the manufacture of this material. No weld repair. This material was heat treated per AMS 2772, Rev G AS9100D:2016. The recording of false, fictitious or fraudulent statements or entries on the certificate may be punished as a felony under federal law. This material meets the requirements of T4 temper and of QQ-A-225/6E Amendment 1 (CANCELLED). Material complies with FAR BAA (FAR 52.225-1, Buy American Act-Supplies), DFARS BAA (DFARS 252.225-7001 Buy American Act & Bal of Payments Prog), and FAR TAA (FAR 52.225-5 Trade Agreements). This material is compliant to RoHS 3, European Union Directive 2011/65/EU and 2015/863/EU.

### **CERTIFICATION**

Kaiser Aluminum Fabricated Products, LLC ("Kaiser") hereby certifies that the metal shipped under this order has been inspected and tested and found in conformance with the applicable specifications forming a part of the description set forth in Kaiser's sales acknowledgement form. Any warranty is limited to that shown on Kaiser's general terms and conditions of sale. Test reports are on file, subject to examination.

John Rennekamp, Quality Manager

Plant Serial: 293443

Kaiser Order Number: 749252

Line Item: 1






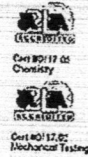
**LABORATORY  
TESTING INC.**

2331 Topaz Drive, Hatfield, PA 19440  
TEL: 800-219-9095 • FAX: 800-219-9096

*Certified Test Report*

TWM001-22-03-07775-1

  
Administered by PPI  
**ACCREDITED**  
Materials Testing Laboratories  
NonDestructive Testing



**SOLD TO**

TW Metals (Cranbury, NJ)  
The Arboretum - Suite 204  
760 Constitution Drive  
Exton, PA 19341

**SHIP TO**

TW Metals (Cranbury, NJ)  
27 Englehard Drive  
Monroe Township, NJ 08831  
ATTN: Kyle Hurst

**CUSTOMER P.O.**

MP60005921

**CERTIFICATION DATE**

3/15/2022

**SHIP VIA**  
EMAIL

**DESCRIPTION**

Quantity: 1  
Item: 42448 ✓  
Material: 2024T351 ALUM AMS 4120 ✓  
Size: 1.00 Dia x 8.0" L ✓  
HT: 20271938 ✓  
Reference: ST 60034522, MP 60005921, PO 60056864 ✓  
MLT: United States ✓  
MFG: United States ✓  
SLB/CL: PTZKU 749252 ✓  
TG#: 471531A ✓

**SEMI-QUANTITATIVE ANALYSIS**

**APPLICABLE SPECIFICATIONS:** AMS 4120S

**KEY:** C - Conforms NC - Non-Conformance R - Report for Information

**RESULT:** The material was found to exhibit the composition of AMS 4120S.  
**KEY (C/NC/R):** C

**Date Completed:** 3/14/2022

**Procedures/Methods:** 86-SCA-0, Rev. 23, Direct Reading Atomic Emissions Spectroscopy

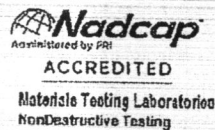
"MATERIAL HAS BEEN CONTROLLED TO LCS  
PER MCL MANUAL F-17 BY TW METALS"  
SIGNED [Signature] DATE 3/16/2022



# LABORATORY TESTING INC.

2331 Topaz Drive, Hatfield, PA. 19440  
TEL: 800-219-9095 • FAX: 800-219-9096

*Certified Test Report*  
TWM001-22-03-07775-1



## TENSILE TEST: LONGITUDINAL

APPLICABLE SPECIFICATIONS: AMS 4120S, Temper T351

KEY: C - Conforms NC - Non-Conformance R-Report for Information

	(ksi) TENSILE STRENGTH	(ksi) YIELD STRESS (0.2% OFFSET)	(%) ELONGATION IN 2" (MANUAL)	FRACTURE LOCATION Report	KEY C/NC/R
REQUIRED	Min 62	Min 45	Min 10		
ACTUAL	70.5	55.5	21	Middle 50% of GL	C

Date Completed: 3/14/2022

Procedures/Methods: 86-TT-2, Rev. 17, Room Temp. Tensile Test for Metallic Materials

Testing performed in accordance with Pratt & Whitney MCL Manual Section F-23. ✓

The services performed above were done in accordance with LTI's Quality System Program Manual Revision 21 dated 5/1/2019 and within the scope of our ISO/IEC 17025:2017 accreditation. These results relate only to the items tested and this report shall not be reproduced, except in full, without the written approval of Laboratory Testing, Inc. The services provided on this certificate have been performed in conformance with the customer's purchase order requirements. L.T.I. is accredited by Nadcap for NDT and Materials Testing for the test methods and specific services as listed in the Scopes of Accreditation available at [www.labtesting.com](http://www.labtesting.com) and [www.eAuditNet.com](http://www.eAuditNet.com). The results reported on this test report represent the actual attributes of the material tested and indicate full compliance with all applicable specification and contract requirements. This is a shared risk decision rule which the customer also has responsibility for determining acceptance of the results.

**MERCURY CONTAMINATION:** During the testing and inspection, the product did not come in direct contact with mercury or any of its compounds nor with any mercury containing devices employing a single boundary of containment.

**NOTE:** The recording of false, fictitious or fraudulent statements or entries on this document may be punishable as a felony under Federal Statutes.

Sherri L. Schelfele  
QA Specialist

*Sherri L. Schelfele*  
Authorized Signature





**Packing  
Slip**

ORDER NO.: 60770002

FROM: CRAN

PAGE 1

CUST NUMBER: 7003300

NET WGT:

11.275 REQ.DATE: 10/18/23 CONFIRMED

SOLD TO:

SHIP TO:

TW METALS - U K +++

TW METALS, UK

MAJESTIC ROAD

MAJESTIC ROAD

NURSING ESTATES

NURSING ESTATES

SOUTHAMPTON SO16 0AF

SOUTHAMPTON ENGLAND

SO16 0AF

UNITED KINGDOM

XXXXX

SALESPERSON:

ASHLEY LAVOIE

SHIP BY:

10/18/23

TERMS:

NET 75 DAYS

VIA:

CUST. CONSIGNE

F.O.B.:

SHIPPING POINT

FREIGHT:

COLLECT

CUST ORD NO.:

B30580243

RELEASE NO.:

RECEIVING PHONE: 011442380739333

LINE ITEM DESCRIPTION

0001 42448 2024T351 ALUM AMS 4120 LCS 1.00 DIA

WIDTH

LENGTH

12.0000

CLN#	ORD QTY	INVOICE QTY	SHIPPED QTY	WT	PC:
	12.000 EA	12.000 EA	11.275 LB	11.275	1:

\*\* 1 TEST REPORTS REQUIRED \*\*

\*\* 1 CERTS REQUIRED \*\*

ECCN: 9A991.d

Export License: NLR

Expiration Date: 0/00/00

PO:60056864 HT:20271938

PC: 12

CUSTOMER QTY:

11.275 UOM LB

MLT:UNITED STATES

MFG:UNITED STATES

SLB/CL:PTZKU 749252

WHEN READY EMAIL DOCUMENTS JENNY.STRINGER@TWMETALS.CO.UK  
AND TRACEY.WRIGHT@TWMETALS.CO.UK THEY WILL ADVISE SHIPPING  
INSTRUCTIONS. ANY DOUBT PLEASE EMAIL  
CRIS.RIVERA@TWMETALS.COM OR ASHLEY.LAVOIE@TWMETALS.COM

AREA	TYPE OF PKG	PKGS	GRS WEIGHT	WIDTH	LENGTH	HGH'
CUSTOME	REDDICRATE	1.000	15.075	5.5000	18.0000	
				CUBIC FT		.286

BY: 2450

RT 001-

CARRIER:

UNLOAD TYPE: PER CUSTOMER SP

DATE SHIPPED

1 PO:



\*B30580243\*

DATE FILLED

**THANK YOU FOR THIS ORDER**

TERMS AND CONDITIONS APPLICABLE TO THE SALE OF THESE  
PRODUCTS ARE SET FORTH ON OUR WEBSITE FOR YOUR CAREFUL  
REVIEW.  
<http://www.twmetals.com/invoice-terms.html>



Packing  
Slip

ORDER NO.: 60770002

FROM: CRAN

PAGE 2

CUST NUMBER: 7003300 NET WGT:

11.275 REQ.DATE: 10/18/23 CONFIRMED

SOLD TO:

SHIP TO:

TW METALS - U K +++

TW METALS, UK

MAJESTIC ROAD

MAJESTIC ROAD

NURSLING ESTATES

NURSLING ESTATES

SOUTHAMPTON SO16 0AF

SOUTHAMPTON ENGLAND

SO16 0AF

UNITED KINGDOM

XXXXX

SALESPERSON:

ASHLEY LAVOIE

TERMS:

NET 75 DAYS

F.O.B.:

SHIPPING POINT

CUST ORD NO.:

B30580243

VIA:

CUST. CONSIGNE

FREIGHT:

COLLECT

RELEASE NO.:

SHIP BY:

10/18/23

27 ENGLEHARD DRIVE

MONROE TWP

NJ 08831

RECEIVING PHONE: 011442380739333

"TW Metals SDS data is available on our website at [www.twmetals.com](http://www.twmetals.com). SDS data can be found under the Company Tab,>Compliance/QA,>SDS. If you do not have access to our website, you may call us at 610-458-1300, and we will mail or fax you a copy of our current SDS date to you."

#### "CERTIFICATE OF CONFORMANCE"

"TW Metals certifies that the material supplied on this purchase order and contained in the heat/lot number referenced above has been manufactured, inspected, and tested in accordance with the material specification. These records are on file at TW Metals. Packaging material for shipments to Europe and China consists of manufactured wood products and complies with the European emergency measures for coniferous non-manufactured wood packing material"

Electronically Generated Certificate-Valid without signature Date: 10/18/23

These commodities have been exported from the United States in accordance with the U.S. export control laws, export administrations regulations. Diversion contrary to U.S. law prohibited.

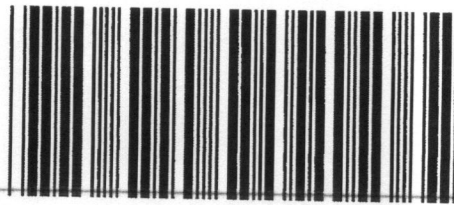
THANK YOU FOR THIS ORDER

TERMS AND CONDITIONS APPLICABLE TO THE SALE OF THESE  
PRODUCTS ARE SET FORTH ON OUR WEBSITE FOR YOUR CAREFUL  
REVIEW.  
<http://www.twmetals.com/invoice-terms.html>



## TW Metals Test Certificates

TW Purchase Order No:	<b>30580243</b>
TW Purchase Order Line No:	<b>0001</b>
Heat No:	<b>20271938</b>



**3050263**

This barcode is for TW Metals archiving use only

20271938

0001

30580243





## TW Metals LTD

Majestic Road, Nursling Estate, Nursling  
Southampton, Hampshire, SO16 0AF  
United Kingdom  
Tel: +44 (0) 23 8073 9333  
twmetals.co.uk

**ISO 9001: 2015 / AS9120: Rev B / AS9100: Rev D**  
**Registration Number: 0002459 / 0002458 / 0078780**

Customer	Cert Details
A J Walter Aviation Ltd The Headquarters Maydwell Avenue Slinfold West Sussex RH13 0AS	Release Note No. <b>30050700</b> Despatch Date <b>30/10/23</b> Account No. <b>3011617</b> Your Ref. No. <b>CPE146940</b>

Specification / Grade / Size	Quantity	Unit	Heat No / Lot No
2024T351 AL AMS 4120 1.00 DIA LENGTH: 304.8000 WIDTH: Part #: . Manufacturer: KAISER ALUMINUM MILL PO: B 30580243 LINE 1 . . ----- End of Line 1 -----	12.000	EA	20271938 Certification Number: M60056864

### Comments

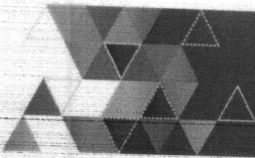
Certified that the whole of the supplies hereon, unless otherwise stated, are covered by the source's Certificate of Conformity or Test Certificate referenced, conform in all respects with the contract or order and have been subject to the Quality System requirements in accordance with the conditions of sale

*Atwell*

78

Signed:  
For and on behalf of TW Metals Ltd. - Tanva Trivett

Date: 2023-10-30



# Delivery Note

Page 1 of 2



## TW Metals LTD

Majestic Road, Nursling Estate, Nursling  
Southampton, Hampshire, SO16 0AF  
United Kingdom  
Tel: +44 (0) 23 8073 9333  
twmetals.co.uk  
VAT Reg No.: GB188 2846 16

CARRIER		VEHICLE NO
Will Call		
INVOICE	DELIVERY REFERENCE	DATE
30050700	3011617/30050700	30-10-2023
CUSTOMERS REFERENCE		
Customer PO: CPE146940 Contact Name: JONATHAN BEST		

### DELIVERY ADDRESS

A J Walter Aviation Ltd  
The Headquarters  
Maydwell Avenue  
Slinfold  
West Sussex  
RH13 0AS  
TEL NO.: 01403-711777

### TERMS AND CONDITIONS

THE SELLER SHALL NOT BE LIABLE  
IN RESPECT OF ANY CLAIM FOR  
SHORTAGES OR DAMAGE MADE  
MORE THAN FIVE DAYS AFTER  
DELIVERY.

CARRIAGE IS PRE- PAID AND  
CHARGED WHERE APPLICABLE

HEALTH AND SAFETY AT WORK  
GIVEN ON REQUEST

PKGS	DESCRIPTION OF PACKAGES	LENGTH	WEIGHT	AREA
1	REDDI CRATE	.4600	5	W/C

VEHICLE REG:

RECEIVED BY:

SIGNATURE:

PRINT NAME:

DATE:

Original Copy  
To be returned  
to TW Metals

GOODS ARE ONLY CARRIED SUBJECT TO  
CONDITIONS OF CARRIAGE AVAILABLE  
ON REQUEST

QUANTITY	UNITS	DESCRIPTION OF GOODS	PART NO.	TARRIF CODE
12.000	EA	2024T351 AL AMS 4120 1.00 DIA 304.8000 X TO BE RATED		
		TOTAL KG 5.120	TOTAL M 3.658	

NONE

Attached Documents  
C OF C  
NONE





## TW Metals LTD

Majestic Road, Nursling Estate, Nursling  
Southampton, Hampshire, SO16 0AF  
United Kingdom  
Tel: +44 (0) 23 8073 9333  
twmetals.co.uk

CARRIER		VEHICLE NO
Will Call		
INVOICE	DELIVERY REFERENCE	DATE
30050700	3011617/30050700	30-10-2023
CUSTOMERS REFERENCE		

VAT Reg No.: GB188 2846 16

Customer PO: CPE146940 Contact Name: JONATHAN BEST

IMPORTANT NOTE FOR FREIGHT AGENTS  
Goods are being removed from customs warehouse authorisation U2942291GB.  
Exports outside UK use CPC 3171000. An NES entry must be sent to TW Metals.  
Failure to comply, will be deemed as acting in an indirect representative  
and liable for any Duty/VAT/Interest that HM Customs demand from TW Metals.

DELIVERY ADDRESS	TERMS AND CONDITIONS
------------------	----------------------

A J Walter Aviation Ltd  
The Headquarters  
Maydown Avenue  
Slinfold  
West Sussex  
RH13 0AS  
TEL NO.: 01403-711777

THE SELLER SHALL NOT BE LIABLE  
IN RESPECT OF ANY CLAIM FOR  
SHORTAGES OR DAMAGE MADE  
MORE THAN FIVE DAYS AFTER  
DELIVERY.

CARRIAGE IS PRE- PAID AND  
CHARGED WHERE APPLICABLE

HEALTH AND SAFETY AT WORK  
GIVEN ON REQUEST

PKGS	DESCRIPTION OF PACKAGES	LENGTH	WEIGHT	AREA
1	REDDI CRATE	.4600	5	W/C
Customer Copy				
Customer Copy				
GOODS ARE ONLY CARRIED SUBJECT TO CONDITIONS OF CARRIAGE AVAILABLE ON REQUEST				

QUANTITY	UNITS	DESCRIPTION OF GOODS	PART NO.	TARRIF CODE
12.000	EA	2024T351 AL AMS 4120 1.00 DIA 304.8000 X TO BE RATED		

TOTAL KG 5.120 TOTAL M 3.658

NONE

Attached Documents  
C OF C  
NONE



DELIVER TO

A J Walter Aviation Ltd  
The Headquarters  
Maydwell Avenue  
Slinfold  
West Sussex  
RH13 0AS

CUSTOMER ORDER NO

CPE146940

CONTACT

JONATHAN BEST 01403-711777

30050700 0001

20-10-23 C



DELIVERY NOTE NO

30050700 0001

ITEM 1 OF 1

DATE 26-10-2023

DESCRIPTION

ABRBO

2024TT351 AL AMS 4120 1.00 DIA

QUANTITY

12 PCS

H/N: 20271938

THE SELLER SHALL NOT BE  
LIABLE IN RESPECT OF ANY CLAIM  
FOR SHORTAGES OR DAMAGE  
MADE MORE THAN FIVE DAYS  
AFTER RECEIVING

In the event of non-delivery  
Please return to

TW Metals Ltd  
Majestic Road, Nursling Estate  
Southampton SO16 0AF  
United Kingdom



Quantity: \_\_\_\_\_

DATE	SHPD PCS	SHPD MTRS	BAL PCS	BAL MTRS	PULLED BY
					3050700-1
				<u>AS WINTER</u>	
				14 RUN BACK	
				2024-T351	
				20271938	
				12 RES + 310 MW.	



Order

**60770002 1**

Line

**TW METALS - UK +++**

TW METALS, UK  
MAJESTIC ROAD  
NURSILING ESTATES  
SOUTHAMPTON ENGLAND  
SO16 0AF  
GB

Cus PO # **B30580243**

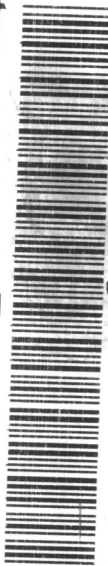
Cus Part

**42448 - 2024T351 ALUM AMS 4120 LCS 1.00 DIA**

Heat Number

**20271938**

Mill#

**PTZKU 749252****18-Oct-2023****E - Summary 1 of 1**Item **42448**Tag **471761**

Pulled From G141E

Quantity on This tag

Quantity on This tag	
FT	12
IN	144
PCS	12
LB	11.275
SQF	0
M	3.658
KG	5.114

Width

Length  
**12.0000****OE**

CONFIRMED

**CUSTOMER CONSIGNED**

TW Metals NexGen4.0 Supply Chain Management System