



SERVICE CENTER METALS
5850 Quality Way
Prince George, VA 23875

CERTIFIED INSPECTION REPORT AND TEST RESULTS FOR EXTRUDED PRODUCTS

OUR ORDER NUMBER	ITEM
140510	1

BILL TO

Copper & Brass Sales, Western
SHIP TO

Copper & Brass Sales, Inc.

Quantity Certified 1,111 lbs

MANIFEST NUMBER

147039

CUSTOMER PO 5400125584

CUSTOMER PART NUMBER ALREC00252

DIE NUMBER

RB0116

ALLOY / TEMPER 6061-T6511

DESCRIPTION SCRB .750x2.500

DATE OF SHIPMENT

12/16/2011

SALES PERSON David Schroeder (W)

CERTIFICATION

ASTM-B221-08 StencilContinuous

SPECIFICATION AMS-QQA-200/8

We hereby certify that the material covered by this report has been inspected in accordance with the most recent certification revision, and has been found to meet the applicable requirements described herein, including any specifications forming a part of the description, and that samples representative of the material met the composition limits and had the mechanical properties shown. SCM extrusions are manufactured in the USA from ingot melted and cast in the United States or Canada.

Items produced and certified as 6061-T6511 also meet the requirements of 6061-T6

Mechanical Properties

Tests	Lot No.	Test Date	Ultimate Tensile Strength (KSI)	Yield Strength (KSI)	Percent Elongation
1	201119703	12/12/11	46.5	43.5	13.0
2	201119703	12/12/11	48.9	45.4	17.5

Chemical Composition for Aluminum Alloy 6061

Cast Number	Alloy	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Others Each	Total	Melted In
1111197	6061	0.69	0.26	0.32	0.10	0.85	0.11	0.04	0.02	0.05	0.15	United States of America

Calvin J. Wiggins, Director of Quality & Technical Services

Rev. 9/23/11 - UMS

Print Date: 12/16/2011

From: Copper and Brass Sales

Cust: ONLINE METALS

Part:

Wgt: 106.000 LB

Del: 2402049193

PO: 78643

Date: 09/07/2012

James K. Baber



Sapa Industrial Extrusions
1550 KIRBY LANE
SPANISH FORK, UT
84660-1349

Sapa Extrusions Inc., a Subsidiary of Sapa AB

Certified Inspection Report

Certified Inspection Report			Cert Number	Page
Sales Order Number	Line No.	Customer P/O	SAPA681131	Page 1 of 2
1100547324	4	5400165566-4	Cert Creation Date	Cert Print Date
			12-DEC-12	12-DEC-12

Invoice To Customer

COPPER & BRASS SALES INC
ATTN: ACCOUNTS PAYABLE
P.O. BOX 5116

SOUTHFIELD, MI - 48066

Ship To Customer

COPPER & BRASS SALES INC
5441 NE 148th Ave
Suite 106

PORTLAND, OR - 97230

Legal Statement

We hereby certify that, unless otherwise indicated, the material covered by this report has been manufactured, inspected, and tested in accordance with, and has been found to meet, the applicable requirements described herein, including any specifications forming a part of the description and that samples representative of the material met the composition and had the mechanical properties shown on the face of this certification. Also, note that mercury is not a normal contaminant in aluminum alloys and neither it nor any of its compounds are used in the manufacture of our product. This certification is not to be reproduced in partial form without prior written approval of our Quality Assurance Dept.

Signature And Title

Wade Bishop

Quality Control Manager

12-DEC-12

Applicable Specifications, Revisions and Exceptions

COMPOSITION NOTE: The values for "Others Each" and "Others Total" have met the limits as shown on this certified inspection report. Remainder is Aluminum.

Quantity Shipped	Date Shipped	Item Description	Specification
525 LB	12-DEC-12	Extruded Rectangular Bar 0.750 TK x 2.500 W RAID	ASTMB221 REV 12 AMS-QQ-A-2008 REV ASMESB221 REV 09 LNS#A96061 REV
B/L	Item No.	144 IN LN FIN M-MILL W/E 2.205 F 03 CS 2.6	
386703	Item No.	6061 T6511	
Delivery Id	Item No. Rev	Marking CONTINUOUS	
4383710			
Customer Part No.			
ALREC00252			

Quantities per Lot / Packages

Package Number	Lot Number	Quantity	UOM	Weight	
				Gross	Net
G14-PKG1380241	21275163	20	PCS	531	525

Composition Limits

Alloy	Si		Fe		Cu		Mn		Mg		Cr		Zn	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
6061	0.40	0.80	---	0.70	0.15	0.40	---	0.15	0.80	1.20	0.04	0.35	---	0.25



Sapa Industrial Extrusions
1550 KIRBY LANE
SPANISH FORK, UT
84660-1349

Certified Inspection Report

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1100547324	4	5400165566-4	
		Cert Number	Page
		SAPA681131	2 of 2
		Cert Creation Date	Cert Print Date
		12-DEC-12	12-DEC-12

Alloy	Ti		Others Each		Others Total	
	Min	Max	Min	Max	Min	Max
6061	---	0.15	---	0.05	---	0.15

Composition Results

Heat/ Cast	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Others Each	Others Total
SI2120607	0.72	0.39	0.24	0.06	0.85	0.05	0.06	0.03	--	--
Heat/ Cast	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Others Each	Others Total
SI2120608	0.72	0.36	0.22	0.06	0.83	0.04	0.08	0.02	--	--

Mechanical Property - Test Limits

Test Type		UTS - L		TYS - L		EL 4B-Long		
UOM		KSI		KSI		PCT		
# of Test		-		-		-		
Test Temper	Lot Number	# of Tests	MIN Value	MAX Value	MIN Value	MAX Value	MIN Value	MAX Value
T6511	21275163	3	49.0	54.1	45.5	51.5	15.0	17.0

Cert Notes

Material manufactured to T6511 specifications also meets T6 requirements.

All elements are represented in the chemical analysis section. The remainder is Aluminum.

All alloys produced at Sapa Industrial Extrusions comply with 0.4% maximum lead per RoHS, with the exception of 6262 alloy

In accordance with EN 10204, Test Report Type 2.2 and Certificate Type 3.1

Material produced in compliance to EN 10204 3.1

Melting and Manufactured in the USA

Made in USA

KAISER ALUMINUM FABRICATED PRODUCTS

Best in Class

CERTIFIED TEST REPORT

<http://Online.KaiserAluminum.com>



KAISER ALUMINUM
FABRICATED PRODUCTS, LLC
6250 EAST BANDINI BLVD
LOS ANGELES, CA 90040-3168

CUSTOMER PO NUMBER: 60-31540-6		CUSTOMER PART NUMBER: 354/STK		PRODUCT DESCRIPTION: .750 X 2.500 SC RECT BAR	
KAISER ORDER NUMBER: 5024023	LINE ITEM: 006	SHIP DATE: 11/14/2012	KAISER LOT NUMBER: HK066-571	ALLOY: 6061	TEMPER: T6511
WEIGHT SHIPPED: 529.000 LB	QUANTITY: 20.000 PCS	B/L NUMBER: 530068	DIAM/DAF/THKNS:	WIDTH:	LENGTH: 12.000 FT
SHIP TO: METALCENTER INC 12034 GREENSTONE AVE SANTA FE SPRINGS, CA 90670 USA			SOLD TO: METALCENTER INC 12034 GREENSTONE AVE SANTA FE SPRINGS, CA 90670 USA		

KA95836

Actual Physical Properties

REFERENCE	DASH#	SAMPLE#	UTS (KSI)	YTS (KSI)	ELONG%	HARDNESS	CONDUCT.	BEND
HK066-571	0001	0001	47.4	42.4	17.1	RE 96	N/A	N/A
HK066-571	0001	0002	47.6	42.5	18.5	RE 95	N/A	N/A
HK066-571	0001	0003	47.5	41.6	16.8	RE 95	N/A	N/A
HK066-571	0001	0004	48.8	42.4	18.5	RE 95	N/A	N/A
HK066-571	0001	0005	49.2	45.7	19.8	RE 95	N/A	N/A

Chemical Composition (wt%), Aluminum Remainder

LIMITS	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Pb	Bi	Zr	Ea	Tot
Maximum	0.8	0.7	0.40	0.15	1.2	0.35	0.25	0.15	NA	NA	NA	0.05	0.15
Minimum	0.40		0.15		0.8	0.04			NA	NA	NA		
033312	.71	.28	.25	.07	.98	.08	.04	.02	.00	.00	.00	.00	.01

Applicable Requirements:

ASTM-B221-12 STENCILED ASME-SB221 1998 SECT II AMS-QQ-A-200/8 (2007) UNS#A96061
(T6511 also conforms to T6-not applicable to other tempers)

Miscellaneous Notes

MANUFACTURED IN USA MELTED IN USA

CERTIFICATION

Kaiser Aluminum Fabricated Products, LLC hereby certifies that metal shipped under this order has been inspected and tested and found in conformance with 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.

Mark Shelley, Quality Manager

Mark Shelley

Mark Shelley
NARASHIA SKINNER
Test Report Dept
METAL CENTER

Plant Serial: 00249653
Kaiser Order Number: 5024023
Line Item: 006



Sierra Aluminum Company
2345 Fleetwood Drive, Riverside, CA 92509
(951) 781-7800 Fax (951) 781-7864

MATERIAL CERTIFICATION

Certification No.: 171190-1/1A

Stencil/Lot No.: 159605-7/1A

Date: 1/17/2013



Sold To: METAL CENTER P.O. BOX 2021 12034 GREENSTONE SANTA FE SPRINGS, CA 90670-0101				Shipped To: METAL CENTER P.O. BOX 2021 12034 GREENSTONE SANTA FE SPRINGS, CA 90670-0101							
P.O. No. 60-31785	Sales Order-Item 171190-1/1A	Part No. .75X2.5 RECT BAR	Description .75X2.5Bar	Die No. 252540							
Material Specification ASTM B221-12, AMS-QQ-A-200/8, ASME-SB-221			Testing Method ASTM B557-06		Alloy-Temper 6061-T6511						
CHEMICAL PROPERTIES FOR 6061 ALLOY											
	SI	FE	CU	MN	MG	CR	ZN	TI	each	total	AL
Minimum	.40	---	.15	---	.80	.04	---	---	---	---	Rem.
Maximum	.80	.70	.40	.15	1.20	.35	.25	.15	.05	.15	
MECHANICAL PROPERTIES											
Cast No.	No. of Tests *	Strength psi				Elong % in 2" or 4D					
		Yield **		Tensile		Min.	Max.				
Min.	Max.	Min.	Max.								
120211-07	1	44285	44285	47797	47797	18	18				
Requirements		35000		38000		10					
EQUIPMENT		Tensile		Extensometer		Spectrometer					
MODEL		SATEC33EMF		T1M-2501		ARL3560-907					
CALIBRATED ON		9/11/2012		9/11/2012		10/1/2012					
DUE ON		3/11/2013		3/11/2013		4/1/2013					

We hereby certify that the aluminum extrusion covered by this report has been inspected and tested in accordance with our standard sampling plan or the requirements of any specifications of the material described in this report. The material has been found to meet the applicable requirements described herein. The samples, representative of the material, met the composition limits and had the mechanical properties shown. Also, note that Mercury is not a normal contaminant in aluminum alloys. Neither Mercury nor any of its compounds are used in the manufacture of our extrusions. Smelted in U.S.A. and manufactured in Fontana/Riverside, California U.S.A.
(Items Certified under 6061/T6511 meet or exceed the requirements of 6061/T6)

Authorized Signature

Mario Reynoso, Quality Service Representative

*When 2 or more tests are made, the highest and lowest values are reported.
**Yield strength is determined by the 0.2% offset method.



NATASHA SKINNER
Test Report Dept.

Natasha Skinner