



CERTIFICATE OF TEST

Certification Date
14-MAR-2013

CUSTOMER ORDER NUMBER

13415 - 1

EARLE M. JORGENSEN COMPANY
P.O. BOX 490130
1775 101ST AVENUE NE
BLAINE MN 55449

Invoice Number
S723997

CUSTOMER PART NUMBER

SOLD TO: DOERING COMPANY

6343 RIVER ROAD SE
CLEAR LAKE MN 55319

SHIP TO:

DOERING COMPANY

6343 RIVER ROAD SE
CLEAR LAKE MN 55319

Description: 6061-T6511 EXTRUDED BAR AMS QQ-A-200/8
1-1/2 RD X 12' Line Total: 1248 LB
HEAT: 201303600 ITEM: 513159

Specifications:

QQ A 200/8

ASTM B221 12A

AMS QQ A 200/8

ALUMINIUM CHEMICAL ANALYSIS

DESCRIPTION:

	SI	FE	CU	MN	MG	CR	ZN	TI
MIN	0.4		0.15		0.8	0.04		
MAX	0.8	0.7	0.4	0.15	1.2	0.35	0.25	0.15

OTHERS : EACH TOTAL
0.05 0.15 AL REMAINDER

RCPT: R929018

MILL : SERVICE CENTER METALS

COUNTRY OF ORIGIN : USA

MECHANICAL PROPERTIES

DESCRIPTION	YLD STR KSI	ULT TEN KSI	%ELONG IN 02 IN	%RED IN AREA	HARDNESS BHN
	45.9	50.0	11.8		
	45.2	49.1	12.6		

DESCRIPTION	YLD STR KSI	ULT TEN KSI	%ELONG IN 02 IN	%RED IN AREA	HARDNESS
	51.0	54.6	13.4		

DESCRIPTION	YLD STR KSI	ULT TEN KSI	%ELONG IN 02 IN	%RED IN AREA	HARDNESS BHN
	49.1	52.0	13.6		

The above data were transcribed from the manufacturer's Certificate of Test after verification for completeness and specification requirements of the information on the certificate. All test results remain on file subject to examination.

We hereby certify that the material covered by this report will meet the applicable requirements described herein, including any specification forming a part of the description.

The willful recording of false, fictitious, or fraudulent statements in connection with test results may be punishable as a felony under federal statutes.

Material did not come in contact with mercury while in our possession.

STEVE TEIPEL

MANAGER, QUALITY ASSURANCE



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DESCRIPTION	YLD STR KSI	ULT TEN KSI	%ELONG IN 02 IN	%RED IN AREA	HARDNESS
	47.5	51.2	13.1		

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STEVE TEIPEL

MANAGER, QUALITY ASSURANCE



SERVICE CENTER METALS
 5850 Quality Way
 Prince George, VA 23875

**CERTIFIED INSPECTION REPORT AND TEST RESULTS
 FOR EXTRUDED PRODUCTS**

OUR ORDER NUMBER	ITEM
155547	1

BLT TO: Metals USA - Rockford
 SHIP TO: Metals USA - Rockford
 Quantity Certified: 2,096 lbs 84 pcs

MANIFEST NUMBER: 165895
 CUSTOMER PO: RCK-57381
 CUSTOMER PART NUMBER: RD0010

DATE OF SHIPMENT: 8/3/2012
 ALLOY/TEMPER: 6061-T6511
 SALESPERSON: David Schroeder
 DESCRIPTION: Lighting Rod Tile 1.500 + .005/- .004

CERTIFICATION: ASTM-B221-12 StencilContinuous
 SPECIFICATION: AMS-QQA-2008-07

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

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
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91	201212493	07/25/12	47.8	44.2	13.7
92	201212493	07/25/12	48.9	46.0	12.5
93	201212493	07/25/12	47.9	44.7	14.9
94	201212493	07/25/12	49.0	45.9	11.6
95	201212493	07/25/12	53.6	50.0	12.8

METALS USA - MPLS
 SOLD TO: *DebenCo*
 PO NO: *12-16988*
 DATE: *11-21-12*

Chemical Composition for Aluminum Alloy 6061

Cast Number	Alloy	Others										Melt Source: United States of America
		Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Al	Each	
062724	6061	0.72	0.34	0.32	0.09	0.89	0.10	0.11	0.02	97.41	0.05	0.15
071622	6061	0.71	0.35	0.31	0.10	0.86	0.08	0.07	0.02	97.50	0.05	0.15

Print Date: 8/3/2012

Calvin J. Wiggins, Director of Quality & Technical Services

Rev. 9/23/11 - UMS