McMASTER-CARR®

Certificate

404-346-7000
404-349-9091 (fax)
atl.sales@mcmaster.com

Purchase Order	Order Date	Placed By	McMaster-Carr Number	Number of Certificates
P1443524	2/3/2022	Jane Beattey	3835098-01	1

Line		Product	Ordered	Status	Certificate
4	9056K17	Multipurpose 6061 Aluminum Round Tube, 1/2" Wall Thickness, 2-1/4" OD, 6 Feet Long	1 each	1 each delivers February 7	172–1415

Your order is subject only to our terms and conditions, available at www.mcmaster.com or from our Sales Department.

Certified Inspection Report

Hydro Extrusion USA, LLC
53 POTTSVILLE STREET
--
CRESSONA, PA
17929-0187

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Invoice To Customer

COPPER & BRASS SALES INC
ATTN: ACCOUNTS PAYABLE
P.O. BOX 5116
--
SOUTHFIELD, MI - 48086

Ship To Customer

COPPER & BRASS SALES INC
8001 THYSSENKRUPP PARKWAY
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NORTHWOOD, OH - 43619

Cert Number	Page
HYDRO3504396	Page 1 of 2

Sales Order Number	Line No.	Customer P/O	Cert Creation Date	Cert Print Date
1101815485	3	5400564556-30	12-NOV-21	12-NOV-21

Quantity Shipped	Date Shipped	Item Description	Specification
1164 LB	12-NOV-21	Extruded Seamless Tube ODxWALL 2.250 OD x 0.500 WALL 288.000 IN LN FIN M-MILL W/F 3.233 F 03 CS 2.25 6061/T6511 Marking CONTINUOUS;	ASTM B241/B241M REV 16 Table 3 Tensile Property Limits for Extruded Tube, Inch-Pound Limits Table 5 Composition Limits ASME SB 241/SB 241M REV 17 ASTM B221 REV 20 Table 1 Chemical Composition Limits Table 2 Mechanical Property Limits ASME SB 221 REV 17 Table 1 Chemical Composition Limits Table 2 Mechanical Properties Limits AMS QQ-A-200/8 REV A
B/L	**Item No.**		
1223264	G03379624		
Delivery Id	**Item No. Rev**		
5338692	--		
CustomerPart No.			
ALTUB00413			

Applicable Specifications, Revisions and Exceptions

For U.S. Government Sales (when applicable to extrusions):
Items supplied are compliant with the Buy
American Act DFARS 252.225-7001
Melted in the USA or a qualifying country, as identified in the Buy
American Act (DFARS 252.225-7001)

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

Hydro Extrusion USA, LLC hereby certifies that the extrusions covered in this report are within the acceptable ranges of the sections or the specification tables, excluding footnotes, identified herein. Chemical composition may be based on results provided by external billet suppliers. Further information on processing, testing including ASTM B557, and inspection is available at www.hydro.com/technicalspecificationsENA. Sales are governed by the Extrusion North America Standard Terms and Conditions of Sale available at www.hydro.com/termsconditionsENA, unless otherwise mutually agreed in writing.

Signature And Title

Darrell Wenrich — 12-NOV-21
Quality Manager

Quantities per Lot / Packages

Package Number	Lot Number	Quantity	UOM	Weight	
				Gross	Net
G12-PKG4001817	R24400450	15	PCS	1172	1164

From: ThyssenKrupp Materials NA
Cust. MCMASTER-CARR SUPPLY CO Del.: 2408584846
CstAr 1099 CstOr RL-61824110
Wgt.: 77.592 LB Date 12/01/2021

Certificate: 172-1415

Certified Inspection Report

Hydro Extrusion USA, LLC
53 POTTSVILLE STREET
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CRESSONA, PA
17929-0187

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Sales Order Number	Line No.	Customer P/O	Cert Creation Date	Cert Print Date
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Composition Limits

Alloy	Si		Fe		Cu		Mn		Mg		Cr		Zn	
	PCT (%)		PCT (%)		PCT (%)		PCT (%)		PCT (%)		PCT (%)		PCT (%)	
	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

Alloy	Ti		Others Each		Others Total	
	PCT (%)		PCT (%)		PCT (%)	
	Min	Max	Min	Max	Min	Max
6061	---	0.15	---	0.05	---	0.15

Composition Results

Heat / Cast	Country of Melt	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Others Each	Others Total
5056260	US	0.65	0.26	0.19	0.04	0.88	0.05	0.02	0.02	--	--
Heat / Cast	**Country of Melt**	**Si**	**Fe**	**Cu**	**Mn**	**Mg**	**Cr**	**Zn**	**Ti**	**Others Each**	**Others Total**
5056262	US	0.65	0.23	0.19	0.04	0.90	0.05	0.02	0.02	--	--

Mechanical Property - Test Limits

Test Type			UTS - L		TYS - L		EL 4D-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	R24400450	1	44.6	44.6	39.6	39.6	16.5	16.5

Notes

Mercury is not a normal contaminant in aluminum alloys and we do not knowingly use it in the manufacture of our goods

Extruded in the USA

Extrusions produced to -T6511 temper also meet -T6 temper requirements

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From: ThyssenKrupp Materials NA
Cust. MCMASTER-CARR SUPPLY CO Del.: 2408584846
CstAr 1099 CstOr RL-61824110
Wgt.: 77.592 LB Date 12/01/2021

Certificate: 172-1415