

Certification of Test Results

SOLD TO
 O NEAL FLAT ROLLED PRODUCTS
 ACCOUNTS PAYABLE
 1229 FULTON AVENUE
 BRIGHTON, CO 80601

SHIP TO
 O NEAL FLAT ROLLED PRODUCTS
 LLC NEW CENTURY
 201 LEAWOOD DRIVE
 P O BOX 41
 NEW CENTURY , KS 66031

CERT NO 0002250867
DATE 12/07/2018
SKID NO 934526
SKID WGT 5,222
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ORDER NO	M79717	PO NO	NC-51696			MILL FINISH NON ANODIZE QUALITY OUT: STANDARD MILL FINISH IN: STANDARD MILL FINISH NOT EMBOSSED
ITEM NO	1	PART NO				
ALLOY	5052	TEMPER	H111	FORM	COIL	
GAUGE	.06300	WIDTH	51.0000	LENGTH	0.0000	

LOT: 763440 COIL: A01 DROP: 848358 Estimated Aluminum Content: 96.9071%

INGOT	SI	FE	CU	MN	MG	CR	NI	ZN	TI
8483582	0.11	0.29	0.04	0.07	2.3	0.19	0.006	0.009	0.03

HEAD ULTIMATE STRENGTH LONG 29.6 KSI
 TAIL ULTIMATE STRENGTH LONG 30.1 KSI
 HEAD YIELD STRENGTH OFFSET=.2% LONG 17.4 KSI
 TAIL YIELD STRENGTH OFFSET=.2% LONG 16.9 KSI
 HEAD ELG IN 2 IN., AT FRACTURE 20 %
 TAIL ELG IN 2 IN., AT FRACTURE 20.5 %

CHEMICAL COMPOSITION ACCORDING TO ASTM E-1251-17a
 CHEMISTRY EXPRESSED AS % W/W FOR EACH REPORTED ELEMENT
 MECHANICAL PROPERTIES ACCORDING TO ASTM B-557-15

** END OF CERTIFICATION **

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. 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. Certification of test results shall not be reproduced except in full. This material was melted in the United States or a qualifying country (REF DFARS 225.872.1A); It was manufactured in the United States.

These commodities, technology and software exported from the United States in accordance with the Export Administration Regulations. Diversion contrary to U.S. law prohibited. This certification complies with EN 10204:2004.

Authorized By:

Elizabeth High-Lab Supervisor