

**K04380**

**KAISER  
ALUMINUM  
FABRICATED PRODUCTS**

*Best in Class*

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

|  |                   |                                   |   |  |                |
|--|-------------------|-----------------------------------|---|--|----------------|
| CUSTOMER PO NUMBER:<br>759677-1  |                   | CUSTOMER PART NUMBER:<br>51666880 |   | PRODUCT DESCRIPTION:<br>KAISERSELECT PRECISON ROD 8.000 +/- .027 |                |
| KAISER ORDER NUMBER:<br>5048590  | LINE ITEM:<br>001 | SHIP DATE:<br>11/14/2014          |   | KAISER LOT NUMBER:<br>Z00027295                                  | ALLOY:<br>6061 |
| WEIGHT SHIPPED:<br>11880.000 LB  |                   | QUANTITY:<br>18.000 PCS           | B/L NUMBER:<br>533417   | TEMPER:<br>T6511B  |                |
| SHIP TO:<br>RYERSON (PICK UP)<br>CUSTOMER PICK UP - LOS ANGELES<br>7910 40TH STREET SE<br>CALGARY, AB T2C 2Y3 CANADA |                   |                                   | SOLD TO:<br>RYERSON<br>161 THE WEST MALL<br>ETOBICOKE, ON M9C4V8 CANADA |  |                |

**Actual Physical Properties**

| REFERENCE | DASH# | SAMPLE# | UTS (KSI) | YTS (KSI) | ELONG% | HARDNESS | CONDUCT. | BEND |
|-----------|-------|---------|-----------|-----------|--------|----------|----------|------|
| Z00027295 | 0001  | 1       | 53.2      | 50.3      | 14.0   | RE 90    | 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  |      |      |
| <b>K04380</b> | .76  | .32 | .30  | .09  | .96 | .10  | .04  | .02  | .00 | .00 | .00 | .01  | .03  |

**Applicable Requirements:**

PER ASTM-B221-14, STENCILED ASME SB221 1998 SECT II PER AMS-QQ-A-200/8 (2012) UNS# A96061 MEETS ALL SPECIFICATION REQUIREMENTS FOR 6061-T6511/T6 ELEVATED MINIMUM MECHANICAL PROPERTIES AS FOLLOWS: UTS = 42.0 KSI MIN YIELD = 38.0 KSI MIN ELONGATION = 10.0% MIN

**Miscellaneous Notes**

MANUFACTURED IN USA (KALAMAZOO,MI) MELTED IN USA  
MERCURY IS NOT A NORMAL BACKGROUND ELEMENT IN ALUMINUM ALLOYS. NEITHER MERCURY NOR ANY OF ITS COMPOUNDS ARE UTILITZED BY KAISER ALUMINUM IN THE MANUFACTURE OF THIS MATERIAL.

**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.

Greg Toupal, Plant Metallurgist



Plant Serial: 00308280  
Kaiser Order Number: 5048590  
Line Item: 001