

KAISER ALUMINUM

FABRICATED PRODUCTS

CERTIFIED TEST REPORT

<http://Online.KaiserAluminum.com>

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

| | | | | | | |
|---|-------------------------|-----------------------------------|---|---|----------------------|--|
| CUSTOMER PO NUMBER: 760882-1 | | CUSTOMER PART NUMBER: 51666055 | | PRODUCT DESCRIPTION: KAISERSELECT PRECISION ROD 4.250 +/-0.017 | | |
| KAISER ORDER NUMBER: 5048582 | LINE ITEM: 001 | SHIP DATE: 11/21/2014 | KAISER LOT NUMBER: P4.250099 | ALLOY: 6061 | TEMPER: T6511B | |
| WEIGHT SHIPPED: 5206.000 LB | QUANTITY: 26.000 PCS | B/L NUMBER: 533439 | DIAM/DIAF/THKNS: | WIDTH: | LENGTH: 12.000 FT | |
| SHIP TO: RYERSON 7945 CORONET ROAD EDMONTON, AB T6E 4N7 CANADA | | | SOLD TO: RYERSON 161 THE WEST MALL ETOBICOKE, ON M9C4V8 CANADA | | | |

Actual Physical Properties

| REFERENCE | DASH# | SAMPLE# | UTS (KSI) | YTS (KSI) | ELONG% | HARDNESS | CONDUCT. | BEND |
|-----------|-------|---------|-----------|-----------|--------|----------|----------|------|
| P4.250C99 | 0001 | 0001 | 58.7 | 55.0 | 15.3 | 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 | | |
| 035172 | .78 | .36 | .30 | .08 | .95 | .10 | .03 | .02 | .00 | .00 | .00 | .01 | .01 |
| 035200 | .72 | .33 | .31 | .10 | .92 | .10 | .06 | .02 | .00 | .00 | .00 | .01 | .01 |
| 035257 | .74 | .32 | .29 | .09 | .96 | .09 | .04 | .02 | .00 | .00 | .00 | .01 | .01 |
| 035180 | .72 | .36 | .29 | .09 | .98 | .10 | .05 | .02 | .00 | .00 | .00 | .01 | .03 |

Applicable Requirements:

PER ASTM-B221-14, STENCILED ASME-SB221 1998 SECT 1I 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 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.

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Plant Serial: 00308725
 Kaiser Order Number: 5048582
 Line Item: 001

093292201

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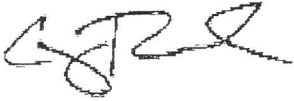
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CERTIFICATION

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



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