

CERTIFICATE OF COMPLIANCE
Material and Production Test Certification
Mueller 14-24" 2361 Tapping Valves

Date: August 30, 2018

WE HEREBY CERTIFY that MUELLER CO. 14-24" T2361 Series Tapping Valves are manufactured and tested at the Mueller ISO 9001 registered facility in Chattanooga, TN, USA. Mueller certifies these valves are UL 262 Listed, FM 1120/1130 Approved, are certified to ANSI/NSF 61 and meet the requirements of AWWA C515. Production testing is performed in accordance with these standards and meets the following specifications.

| APPROVALS / PRODUCTION TESTING | | | | | | | |
|--------------------------------|-----------------|-----------|------------|----------|----------|-----------------------|------------------------|
| Size | Description | Model No. | AWWA (psi) | UL (psi) | FM (psi) | Hydro Seat Test (psi) | Hydro Shell Test (psi) |
| 14 – 16" | Tapping FL x MJ | T2361-19 | 250 | 250 | 250 | 375/375 | 500 |
| 18 – 24" | Tapping FL x MJ | T2361-19 | 250 | 175 | 250 | 275/275 | 500 |

* NOTE: FM only approves Open Left valves.

Mueller certifies that valve body, bonnet and wedge are manufactured in a Mueller foundry in Albertville, AL or Chattanooga, TN per Mueller QA procedures; each heat is tested and certified to be within the specification shown in the chart below under a controlled program and in accordance with ASTM A536 Ductile Iron.

| Ductile Iron: ASTM A536 | | | | | | | | | | |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| CHEMICAL COMPOSITION | | | | | | | | | | |
| Element | C | Si | Mn | S | Cu | P | Cr | Ti | Pb | Mo |
| Minimum | 3.900 | 2.500 | 0.370 | ----- | 0.140 | ----- | ----- | ----- | ----- | ----- |
| Maximum | 3.950 | 2.800 | 0.420 | 0.022 | 0.180 | 0.050 | 0.080 | 0.015 | 0.005 | ----- |

Mueller certifies that A2361 valves feature manganese bronze stems manufactured under a controlled program and are in accordance with the following alloys.

| 14-16" Valves: Manganese Bronze ASTM B138; Alloy C67600 (H02) | | | | | | | | | |
|--|-------|------|------|------|------|-----------|-----------------------|--------|------------|
| Chemical Composition | | | | | | | Mechanical Properties | | |
| Element | Cu | Fe | Pb | Mn | Sn | Zn | Tensile | Yield | Elongation |
| Minimum | 57.00 | 0.40 | 0.50 | 0.05 | 0.50 | Remainder | 70,000 | 35,000 | 15.00% |
| Maximum | 60.00 | 1.30 | 1.00 | 0.50 | 1.50 | Remainder | ----- | ----- | ----- |

| 18-24" Valves: Manganese Bronze ASTM B584; Alloy C86400 | | | | | | | | | | |
|--|-------|------|------|------|------|------|-----------------------|---------|--------|------------|
| Chemical Composition | | | | | | | Mechanical Properties | | | |
| Element | Cu | Al | Fe | Pb | Mn | Sn | Zn | Tensile | Yield | Elongation |
| Minimum | 56.00 | 0.50 | 0.40 | 0.50 | 0.10 | 0.50 | 34.00 | 60,000 | 20,000 | 15.00% |
| Maximum | 62.00 | 1.50 | 2.00 | 1.50 | 1.50 | 1.50 | 42.00 | ----- | ----- | ----- |

Mueller certifies that A2361 14-16" valves feature SBR encapsulated wedges and 18-24" valves feature EPDM encapsulated wedges. Wedges are manufactured under a controlled program and are in accordance with the following elastomer specifications.

| SBR (Mueller Rubber Specification R-88); ASTM D2000 | | | | |
|--|-----------|---------|------------|-----------------|
| Specification | Durometer | Tensile | Elongation | Compression Set |
| Minimum | 73 | 2,000 | 200% | 0.00 |
| Maximum | 83 | ---- | ---- | 18.00 |

| EPDM (Mueller Rubber Specification R-97); ASTM D2000 | | | | |
|---|-----------|---------|------------|-----------------|
| Specification | Durometer | Tensile | Elongation | Compression Set |
| Minimum | 69 | 2,000 | 200% | 0.00 |
| Maximum | 79 | ---- | ---- | 18.00 |

Mueller certifies the coating supplied with these valves is Mueller® Pro-Gard™ Epoxy Coating, an exceptional fusion bonded epoxy electrostatically applied to valve internal and external surfaces to protect against corrosion. This

coating is Sienna red in color, non-toxic and suitable for use with drinking water components. Mueller valves with Pro-Gard are certified to NSF 61 and meet or exceed AWWA C550 requirements. Valves have a standard coating of ten mils nominal thickness.

Mueller certifies that components for T2361 Tapping Valves are manufactured in accordance with Mueller Co. QA procedures which include but are not limited to relevant dimensional, visual, and functional inspection and verification.

Respectfully,



Anton Nasledov
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