

<?xml version="1.0" encoding="UTF-8"?>

<!--

MatML Version 3.0 Schema Example 2 - Aluminum Alloy from a Printed Handbook
Prepared by - E.F. Begley, NIST and J.G. Kaufman, The Aluminum Association, Inc.
Source - Handbook data generously provided by F. Cervera of ASM International and J.G. Kaufman of the
Aluminum Association from Properties of Aluminum Alloys, p. 291, ASM International, Materials Park, Ohio,
ISBN: 0-87170-632-6, 1999.

-->

<MatML_Doc xmlns:xsi="http://www.w3.org/2000/10/XMLSchema-instance" xsi:noNamespaceSchemaLocation="matml.xsd">

<Material>

<BulkDetails>

<Name authority="The Aluminum Association Alloy Designation System">1350</Name>

<Class>metal</Class>

<Subclass>aluminum alloy</Subclass>

<Specification>ASTM B230</Specification>

<Form>Rolled rod and shapes</Form>

<ProcessingDetails>

<Name>Temper H18</Name>

</ProcessingDetails>

<Characterization>

<Formula>Al</Formula>

<DimensionalDetails>

<Name>Thickness</Name>

<Value format="string">0.5,2.0</Value>

<Units name="inches">

<Unit>in</Unit>

</Units>

<Qualifier>min.,max.</Qualifier>

</DimensionalDetails>

</Characterization>

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<DataSourceDetails id="ds1" type="handbook, typical data">

<Name>

"Properties of aluminum alloys : tensile, creep, and fatigue data at high and low temperatures" / edited by J. Gilbert Kaufman.

</Name>

<Notes>

Plus (+) indicates tension; minus (-) indicates compression.

</Notes>

</DataSourceDetails>

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<PropertyDetails id="pr1" type="mechanical">
  <Name>Axial-Stress Fatigue Strength</Name>
  <Units name="ksi" description="kip per square inch">
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  </Units>
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<PropertyDetails id="pr2" type="mechanical">
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  <Units name="MPa" description="megapascals">
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<MeasurementTechniqueDetails id="mt1">
  <Name>ASTM E597</Name>
</MeasurementTechniqueDetails>
<SpecimenDetails id="sp1" type="cylindrical">
  <Name>smooth specimen</Name>
  <Notes>diameter = 0.375 inches</Notes>
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  <Unitless/>
  <Notes>Stress Ratio (R) = (minimum stress)/(maximum stress)</Notes>
</ParameterDetails>
<ParameterDetails id="pa2">
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<ParameterDetails id="pa3">
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</Metadata>
<Glossary>
  <Term>
    <Name>H18</Name>
    <Definition>
      "H18" is a code from The Aluminum Association Temper Designation System. The H is defined as "strain-hardened (wrought products only). The 1 applies to products that are strain-hardened to obtain the desired strength without supplementary thermal treatment. The 8 indicates the degree of strain-hardening and is assigned to the hardest tempers normally produced.
    </Definition>
  </Term>
  <Term>
    <Name>1350</Name>
    <Definition>
      "1350" is a code from The Aluminum Association Alloy Designation System. The first digit of the code represents the principal alloying constituent(s). The second digit indicates variations of the initial alloy. The third and fourth digits indicate individual alloy variations (the numbers have no significance but are unique). 1350 is an alloy that is pure AL (99.00% or greater). For further details, contact The Aluminum Association, 900 19th Street, N.W., Washington, D.C. 20006.
    </Definition>
  </Term>
</Glossary>
</Material>
</MatML_Doc>

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