A L L O Y  D E S C R I P T I O N

The purest of the aluminum alloys. This alloy is typically used in applications requiring maximum ductility and relatively low strength. Good corrosion resistance, workability and weldability.

1 Alloy subject to cast lot quantity restriction

T Y P I C A L  M E C H A N I C A L  P R O P E R T I E S

<table>
<thead>
<tr>
<th>Temper</th>
<th>Tensile (0.0625&quot; Dia. Specimen)</th>
<th>Hardness</th>
<th>Shear</th>
<th>Fatigue</th>
<th>Modulus of Elasticity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ultimate</td>
<td>Yield</td>
<td>Elongation/4D</td>
<td>Brinell 500kg 10 mm</td>
<td>Ultimate Shearing Strength</td>
</tr>
<tr>
<td></td>
<td>KSI</td>
<td>MPa</td>
<td>%</td>
<td>KSI</td>
<td>MPa</td>
</tr>
<tr>
<td>O</td>
<td>13</td>
<td>90</td>
<td>5</td>
<td>35</td>
<td>23</td>
</tr>
<tr>
<td>H14</td>
<td>18</td>
<td>125</td>
<td>17</td>
<td>115</td>
<td>32</td>
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<tr>
<td>H18</td>
<td>24</td>
<td>165</td>
<td>22</td>
<td>150</td>
<td>44</td>
</tr>
</tbody>
</table>

C O M P A R A T I V E  C H A R A C T E R I S T I C S

<table>
<thead>
<tr>
<th>Temper</th>
<th>Corrosion Resistance</th>
<th>Cold Workability^3</th>
<th>Machinability^3</th>
<th>Anodize Response^3</th>
<th>Brazeability^4</th>
<th>Weldability^4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>General^1</td>
<td>Stress^2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>O</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>E</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>H14</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>D</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>H18</td>
<td>A</td>
<td>A</td>
<td>C</td>
<td>D</td>
<td>A</td>
<td>A</td>
</tr>
</tbody>
</table>

1 Ratings A through E are relative ratings in decreasing order of merit, based on exposures to sodium chloride solution by intermittent spraying or immersion. Alloys with A and B ratings can be used in industrial and seacoast atmospheres without protection. Alloys with C, D and E ratings generally should be protected at least on faying surfaces.

2 Stress-corrosion cracking ratings are based on service experience and laboratory tests of specimens exposed to the 3.5% sodium chloride alternate immersion test.
   A= No known instance of failure in service or in laboratory tests.
   B= No known instance of failure in service; limited failures in laboratory tests of short transverse specimens.
   C= Service failures with sustained tension stress acting in short transverse direction relative to grain structure; limited failures in laboratory tests of long transverse specimens.
   D= Limited service failures with sustained longitudinal or long transverse.

3 Ratings A through D for Workability (cold), A through E for Machinability and A through C for Anodize Response, are relative ratings in decreasing order of merit.

4 Ratings A through D for Weldability and Brazeability are relative ratings defined as follows:
   A= Generally weldable by all commercial procedures and methods.
   B= Weldable with special techniques or for specific applications that justify preliminary trials or testing to develop welding procedure and weld performance.
   C= Limited weldability because of crack sensitivity or loss in resistance to corrosion and mechanical properties.
   D= No commonly used welding methods have been developed.
**APPLICABLE SPECIFICATIONS**

<table>
<thead>
<tr>
<th></th>
<th>Cold Drawn</th>
<th>Extruded</th>
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<tbody>
<tr>
<td></td>
<td>ASTM B210</td>
<td>ASTM B221</td>
</tr>
<tr>
<td></td>
<td>AMS 4062</td>
<td>ASTM B241</td>
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<td>AMS-T-700/1</td>
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**CHEMICAL COMPOSITION LIMITS**

<table>
<thead>
<tr>
<th>Weight %</th>
<th>Si</th>
<th>Fe</th>
<th>Cu</th>
<th>Mn</th>
<th>Mg</th>
<th>Cr</th>
<th>Ni</th>
<th>Zn</th>
<th>Ti</th>
<th>Each</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td>Minimum</td>
<td>..</td>
<td>..</td>
<td>0.05</td>
<td>..</td>
<td>..</td>
<td>..</td>
<td>..</td>
<td>..</td>
<td>..</td>
<td>..</td>
<td>..</td>
</tr>
<tr>
<td>Maximum</td>
<td>0.95 Si + Fe</td>
<td>0.2</td>
<td>0.05</td>
<td>...</td>
<td>...</td>
<td>0.10</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>0.05</td>
<td>0.15</td>
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**TYPICAL PHYSICAL PROPERTIES**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>English</th>
<th>Metric</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal Density (68 °F/20 °C)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>English: lbs./in.³</td>
<td>0.099</td>
<td>2.71</td>
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<tr>
<td>Metric: g/cm³</td>
<td></td>
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</tr>
<tr>
<td>Melting Range</td>
<td>1190 °F - 1215 °F</td>
<td>640 °C – 655 °C</td>
</tr>
<tr>
<td>Coefficient of Thermal Expansion</td>
<td>Linear</td>
<td></td>
</tr>
<tr>
<td>English: micro in./in.-°F</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metric: micro m/m -°K</td>
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</tr>
<tr>
<td>68 °F-212 °F</td>
<td>13.1</td>
<td>23.6</td>
</tr>
<tr>
<td>20 °C-100 °C</td>
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<tr>
<td>Thermal Conductivity (68 °F/20 °C)</td>
<td>O</td>
<td></td>
</tr>
<tr>
<td>English: BTU-in/ft2hr°F</td>
<td>1540</td>
<td>222</td>
</tr>
<tr>
<td>Metric: W/m x K</td>
<td>1510</td>
<td>218</td>
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<tr>
<td>H18</td>
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<td></td>
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<tr>
<td>Electrical Conductivity (68 °F/20 °C)</td>
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<tr>
<td>English: %IACS @ 68°F</td>
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<td>Metric: MS/M @ 20°C</td>
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<td>Equal Volume</td>
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<td></td>
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<tr>
<td>O Temper</td>
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<td>113</td>
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<tr>
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<td>108</td>
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<tr>
<td>Equal Weight</td>
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