General Product Description

SSAB’s ASTM A656 Grade 80 steel plate is a formable, high-strength, low-alloy hot-rolled material that has been developed for applications where increased strength-to-weight ratios are required. A656 Grade 80 is available as temper-leveled, cut-to-length plate or as discrete, as-rolled plate.

Applications

A656 Grade 80 plates are designed to be used for transport trailers, construction equipment, crane booms, mobile manlifts, agriculture equipment, rail cars, and heavy vehicle frames & chassis.

Dimensions

<table>
<thead>
<tr>
<th>Grade</th>
<th>Product Type</th>
<th>Thickness (Inches)</th>
<th>Width (Inches)</th>
<th>Length (Inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>80</td>
<td>Mill Plate</td>
<td>0.437 - 1.000(1)</td>
<td>72 - 120(1)</td>
<td>120 - 1020(1)</td>
</tr>
<tr>
<td>80</td>
<td>Temper Leveled Plate</td>
<td>0.100 - 0.500(3)</td>
<td>48 - 96</td>
<td>72 - 720</td>
</tr>
<tr>
<td>80</td>
<td>Coil for Conversion To</td>
<td>0.188 - 0.500(5)</td>
<td>60 - 96(5)</td>
<td></td>
</tr>
</tbody>
</table>

1) Please inquire for plate thicknesses less than 0.437 inches and greater than 1.00 inches, widths less than 84 inches and greater than 120 inches, and for plate lengths less than 120 inches and greater than 1020 inches.

2) SSAB’s Cut-To-Length facilities use the temper leveled coil (TLC) process to produce temper leveled plate products. For additional information concerning our temper leveling process, please refer to our SSAB Americas: North American Cut-to-Length Operations brochure located under the Downloads section of our Commercial Steels Overview page.

3) Coils are excluded from qualification to this specification until they are processed into a finished plate product and all required processing, inspections, and testing are performed. Coil product may require additional processing such as temper leveling to achieve the minimum yield strength as specified by ASTM. Coils For Conversion To product will be certified to chemistry only. Please notify SSAB how coils will or will not be processed through a temper mill. Coils will be subject to availability, so please inquire.

4) Please inquire for coil thicknesses greater than 0.500 inches and for coil widths less than 60 inches and greater than 96 inches. Slitting capabilities are determined by strength levels and thicknesses, so please inquire all slit coil opportunities.

5) Please inquire for thicknesses over 0.500 inches up to 0.625 inches.

Mechanical Properties

Tension testing is performed in the transverse direction according to ASTM A6 requirements. The required mechanical properties are tabulated below:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Thickness (Inches)</th>
<th>Yield strength, min. (ksi)</th>
<th>Tensile strength, min. (ksi)</th>
<th>Elongation in 2(^{1)}) (min %)</th>
<th>Elongation in 8(^{1)}) (min %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>80</td>
<td>0.100 - 1.000</td>
<td>80</td>
<td>90</td>
<td>15</td>
<td>12</td>
</tr>
</tbody>
</table>

1) For plates wider than 24 inches, the elongation requirement is reduced three percentage points. Additional elongation requirement adjustments are allowed per the Tension Test section of ASTM A6.

Tolerances

Tolerances for Mill Plate:

Thickness, width and length tolerances for A656, Grade 80 plates are in accordance with ASTM A6. ASTM A6 Standard Flatness tolerances are available for all plate thicknesses.

Tolerances for Temper Leveled Plate:

Thickness, width and length tolerances for A656, Grade 80 plates are in accordance with ASTM A6. ASTM A6 Half-Standard Flatness tolerances or better are available for temper leveled plates. Flatness capabilities are determined by the processing line and the minimum yield strength of the material.

Tolerances for Coils For Conversion To:

For minimum gauge orders, thickness and width tolerances are in accordance with the respective ASTM specifications of A68 for thicknesses of less than 0.230 inches(exclusive), and A635 for thicknesses of 0.230 inches to 1.00 inch, inclusive. Thickness tolerances are in accordance with Table S1.1 found in each of the ASTM specifications of A635 and A68, respective of thickness. Width tolerances are in accordance with Table 6 of ASTM A68 and Table 5 of ASTM A635. Thickness tolerances for nominal gauge orders must be inquired.

Contact Information

www.ssab.com/contact