Ympress® Laser S355MC
Strong, consistent and highly formable

Ympress® Laser S355MC is a hot-rolled, high-strength, low-alloy steel. It is optimised for efficient laser cutting and post-cut processing. The product combines high strength with outstanding formability and consistent quality. It is suitable for a wide range of applications including pressed components for automotive seating, fuel systems and radiators. It is also a popular choice for lifting and excavating where high strength and toughness are paramount.

Ympress® Laser S355MC offers exceptional flatness, minimised internal stress and high-quality surfaces. Consistent product characteristics ensure fast, reliable automated processing for increased productivity and improved part yield. A clean-cut edge – even at high cutting speeds - allows simple release of cut parts and reduces post-cut work. Suitable also for conventional cutting methods, Ympress® Laser S355MC can be easily welded and galvanised.

Mechanical properties (parallel to the rolling direction)

<table>
<thead>
<tr>
<th>Elongation after fracture A</th>
<th>Min. yield strength</th>
<th>Min. - Max. tensile strength</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>R_p in MPa</td>
<td>R_m in MPa</td>
</tr>
<tr>
<td>Typical value</td>
<td>390</td>
<td>485</td>
</tr>
<tr>
<td>Guaranteed</td>
<td>≥ 355</td>
<td>450-550</td>
</tr>
<tr>
<td>EN-10149-2</td>
<td>≥ 355</td>
<td>430-550</td>
</tr>
</tbody>
</table>

* ≤ 180º bend radius, measured transverse to the rolling direction
** ≤ 90º bend radius, measured in all directions

Impact strength (optional and parallel to the rolling direction)

<table>
<thead>
<tr>
<th>Impact test</th>
<th>J at -20°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guaranteed*</td>
<td>&lt; 6 mm**</td>
</tr>
<tr>
<td></td>
<td>6-20 mm</td>
</tr>
</tbody>
</table>

* In accordance with EN 10149 the impact values above are only guaranteed if accepted on order
**No impact tests are carried out for thicknesses <6mm

Chemical composition (% by weight)

<table>
<thead>
<tr>
<th>C</th>
<th>Mn</th>
<th>Si</th>
<th>P</th>
<th>S*</th>
<th>Al</th>
<th>Nb</th>
<th>V</th>
<th>Ti</th>
<th>Mo</th>
<th>Ceq**</th>
<th>Ceq**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guaranteed</td>
<td>≤ 0.10</td>
<td>≤ 1.40</td>
<td>≤ 0.030</td>
<td>≤ 0.020</td>
<td>≤ 0.008</td>
<td>≥ 0.015</td>
<td>≤ 0.05</td>
<td>-</td>
<td>≤ 0.025</td>
<td>0.17</td>
<td>0.29</td>
</tr>
<tr>
<td>EN 10149-2</td>
<td>≤ 0.12</td>
<td>≤ 1.50</td>
<td>≤ 0.50</td>
<td>≤ 0.025</td>
<td>≤ 0.020</td>
<td>≥ 0.015</td>
<td>≤ 0.09</td>
<td>≤ 0.20</td>
<td>≤ 0.15</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

* Extra low sulphur content - max 0.005% available to special order
**Ceq is a typical value

Tolerances on thickness
Ympress® Laser products comply to ½ EN 10051:2010. Tighter tolerances are available on request.

Certification
A 2.2 certificate is issued as standard with Ympress® Laser products . Other certificate types are available on request.

Product support
We want you to get the best from Ympress® Laser products . Our technical engineers and trained sales staff are always happy to answer your questions on steel selection and application. Our engineers are available to assist you with process and product design optimisation for improved throughput, yield and end-product performance.
**Ympress® Laser range**

Steel grades: E250C, S355MC, S420MC

Thickness range: 1.5 - 15mm (up to 20mm on request)

Width range: 900 - 2070mm

Surface treatment: Hot rolled dry, pickled and oiled

---

**Available dimensions of Ympress® Laser S355MC**

- Available as hot-rolled non-pickled coils/sheets
- Available as hot-rolled pickled coils/sheets
- Available as hot-rolled pickled sheets

---

While care has been taken to ensure that the information contained in this publication is accurate, neither Tata Steel Europe Limited, nor its subsidiaries, accept responsibility or liability for errors or for information which is found to be misleading.

Tata Steel Europe Limited is registered in England under number 05957565 with registered office at 30 Millbank, London SW1P 4WF, United Kingdom.

Copyright 2016 Tata Steel Europe Limited