Njørdal™ Marine Sheet and Plate

Strong. Light. Durable.

High-End Aluminium for Premium Yachts and Ships
In Norse mythology, Njørd was a god, associated with the sea, seafaring, wind, fishing, wealth, and crop fertility. Still in 19th century, fishers thanked Njord for a bountiful catch.

In materials, aluminium is the shining star for a sustainable loop of resources: easy to gain, make, form and shape; light and fuel efficient; safe and strong; almost maintenance free; durable in all weathers and waters; and full of energy, with environment benefits growing in every new cycle of recycling and application.

Njørdal™, our advanced flat-rolled material based on 5083 alloy, resonates in both Njørd and the metal.

» Gain in strength
» Enhanced safety
» Optimized weight
» Higher speed
» Fully recyclable

Njørdal™
... is based on established manufacturing techniques
... resists marine environments, enhanced through dedicated thermo-dynamic processing
... ensures perfect tolerances, precisely made.

The resulting weight of hulls and superstructures made with Njørdal™ will accurately meet the designers’ original calculations.

Certified!
We are certified according to all relevant ISO regulations, major leading institutions of shipbuilding classification and the high CoC standard of the Aluminium Stewardship Initiative (ASI).
**Njørdal™**

**Great to build – Long to last**

**Strength 15% above traditional 5083**

<table>
<thead>
<tr>
<th></th>
<th>Min. Yield Strength Rp0.2 (MPa)</th>
<th>Min. Ultimate Tensile Strength Rm (MPa)</th>
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</thead>
<tbody>
<tr>
<td>Njørdal™ H116</td>
<td>220</td>
<td>305</td>
</tr>
<tr>
<td>Njørdal™ H111</td>
<td>145</td>
<td>290</td>
</tr>
<tr>
<td>5083 H111</td>
<td>125</td>
<td>275</td>
</tr>
</tbody>
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*Values of temper H111 represent strength after welding. For details, see our technical datasheets*

**Durability**

Njørdal™ Marine Sheet and Plate withstands harshest marine environments, even if left unpainted. Its unique thermo-dynamic processing and a dedicated stabilization heat treatment lead to excellent results in testing according to the requirements of ASTM B928: In the Nitric Acid Mass Loss Test (NAMLT), its mass loss is lower than 50% of the maximal permitted value.

**Weldability**

All welding techniques as for 5083 can be applied. Recommended filler wires are 5556 A or 5183 (preferably with Mg content >4.6%)

Cross section of Njørdal™ MIG butt weld; filler wire type 5183
Minimum heat affected zone achieved by optimized welding parameters
Hydro is a fully integrated aluminium company with 35,000 employees in 40 countries on all continents, combining local expertise, worldwide reach and unmatched capabilities in R&D. In addition to production of primary aluminium, rolled and extruded products and recycling, Hydro also extracts bauxite, refines alumina and generates energy to be the only 360° company of the global aluminium industry. Hydro is present within all market segments for aluminium, with sales and trading activities throughout the value chain serving more than 30,000 customers. Based in Norway and rooted in more than a century of experience in renewable energy, technology and innovation, Hydro is committed to strengthening the viability of its customers and communities, shaping a sustainable future through innovative aluminium solutions.