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| <b>Data Sheet:</b><br><br><b>EN AW 1050A – Rolled products</b><br><b>99,50% Pure Aluminium</b><br><br><b>Alumeco A/S</b> | <b>Internal alloy name:</b> 1050A<br><br><b>International alloy name :</b> EN AW 1050A<br><b>Chemical Symbol:</b> EN AW - Al 99,5<br><br><b>DIN-Werkstoff no.:</b> 3.0255<br><b>Alloy type:</b> Non heat treatable alloy |
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| <b>Main usage:</b> <ul style="list-style-type: none"> <li>• Constructions</li> <li>• Cabinets</li> <li>• Deep-drawn parts</li> <li>• Strips for heat exchanger</li> <li>• Light reflectors</li> </ul> | <b>Main properties:</b> <ul style="list-style-type: none"> <li>• Very good atmospheric corrosion resistance</li> <li>• Very good workability</li> <li>• High thermal and electrical conductivity (preferred alloy 1350)</li> <li>• Attractive appearance</li> <li>• High reflectivity.</li> <li>• Suitable for decorative anodizing*</li> <li>• Very good weld ability.</li> <li>• Low mechanical properties.</li> </ul> <p><small>*Not for Continuously Cast (CC) materials</small></p> | <b>Important norms and literature:</b> <p>Cold rolled products:<br/>           EN485-1: Technical conditions for inspection and delivery<br/>           EN485-2: Mechanical properties<br/>           EN485-4: Tolerances on dimensions and form cold rolled products</p> <p>Deep-drawn parts:<br/>           EN1669: Earing test for sheet and strip</p> <p><b>Chemical composition:</b><br/>           EN573-3: Chemical composition</p> |
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**Chemical composition. EN573-3:2013**

| Si   | Fe   | Cu   | Mn   | Mg   | Cr | Zn   | Ti   | Remarks      | Other elements<br>Each together |
|------|------|------|------|------|----|------|------|--------------|---------------------------------|
| 0,25 | 0,40 | 0,05 | 0,05 | 0,05 | -  | 0,07 | 0,05 | Min 99,5% Al | 0,03 -                          |

**Typical mechanical properties. EN485 - 2**

| Thickness range<br>(mm) | Temper | Rm<br>MPa | Rp0,2<br>MPa | A<br>% | Hardness*<br>HB | Bend radius** |      |
|-------------------------|--------|-----------|--------------|--------|-----------------|---------------|------|
|                         |        |           |              |        |                 | 180°          | 90°  |
| 0,5 up to 1,5           | H111   | 65 - 95   | Min. 20      | 22     | 20              | 0t            | 0t   |
| 1,5 up to 3,0           | H111   | 65 - 95   | Min. 20      | 26     | 20              | 0t            | 0t   |
| 0,5 up to 1,5           | H14    | 105 - 145 | Min. 85      | 2      | 34              | 1,0t          | 0,5t |
| 1,5 up to 3,0           | H14    | 105 - 145 | Min. 85      | 4      | 34              | 1,0t          | 1,0t |
| 3,0 up to 6,0           | H14    | 105 - 145 | Min. 85      | 5      | 34              | -             | 1,5t |

\*\* Information values only;

**Physical properties:**

| Density<br>g/cm <sup>3</sup> | Solidification<br>range<br>°C | Electrical<br>conductivity<br>%IACS | Thermal<br>conductivity<br>W/m K | Thermal<br>expansion<br>( $\mu\text{m m}^{-1} \text{K}^{-1}$ ) | Annealing<br>temperature | E - modulus<br>(N / mm <sup>2</sup> ) |
|------------------------------|-------------------------------|-------------------------------------|----------------------------------|--|--------------------------|---------------------------------------|
| 2,70                         | 645-658                       | 59,5                                | 210-220                          | 23,5   | 350°C                    | 69.000                                |

**Typical Alumeco products with this alloy**

- Sheets in the size of 0,5 – 6 mm in three different sizes (1000x2000; 1250x2500; 1500x3000) and tempers H14
- 1 – 3 mm warehouse materials (Continuously Cast)
- Deep-drawn sheets in the size of 1 – 2 mm - Temper H111
- Sheets with stucco pattern
- Strips/Coils

**Properties and information's (3 high/good; 2 Middle; 1 Poor/bad)**

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| <b>Resistance:</b><br>Corrosion index, general: 3<br>Marine Atm. Corr index: 3<br><br><b>Hot workability:</b><br>Extrusion: 3<br>Forging: 3<br><br><b>Cold formability:</b><br>Cold formability general: 3<br>Deep drawing: 3<br>Bending: 3 | <b>Weldability</b><br>TIG welding: 3<br>MIG welding: 3<br><br><b>Solderability</b><br>Brazability index: 3<br>Solderability index: 3 | <b>Machinability</b><br>Machinability index: 1<br><br><b>Tips on machinability:</b><br>Tools for aluminum processing:<br>high-usable cutting speeds,<br>possibly > 2000 m / min. | <b>Anodizing:</b><br>Decorative anodizing surface<br>treatment: 3 (CC cast materials 1)<br>Protective anodizing index: 3<br>Hard anodizing: 3<br>Color anodizing: 3 (CC cast materials<br>1)<br><br><b>General Information:</b><br>Decorative Anodizing cannot be<br>recommended for Continuously<br>Cast (CC) materials |
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