Ultra-Soft, High-Formability Austenitic Stainless Steel

NSSC 304JS

17Cr-8Ni-3Mn-3Cu-LC,N / Similar grade : SUS 304J1,J2

**Features and Applications**

NSSC 304JS is a new grade of austenitic stainless steel with ultrasoftness (low yield strength and restrained work hardening)

1. High performance in multistage drawing and secondary work after press forming with a minimal spring back.
2. High resistance to season cracking.
3. Extremely smaller magnetism than SUS 304 after forming.
4. The line-up includes a pre-coated, oil-free, highly lubricated sheet.

**Characteristics**

[Mechanical properties]

<table>
<thead>
<tr>
<th>Specification</th>
<th>Yield strength 0.2% offset N/mm²</th>
<th>Tensile strength N/mm²</th>
<th>Elongation %</th>
<th>Hardness H V</th>
<th>n value</th>
<th>Liquid press bulge height mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typical values</td>
<td>190</td>
<td>484</td>
<td>59</td>
<td>117</td>
<td>0.39</td>
<td>42.2</td>
</tr>
<tr>
<td>SUS 304 - Typical values</td>
<td>267</td>
<td>655</td>
<td>60</td>
<td>170</td>
<td>0.49</td>
<td>40.3</td>
</tr>
</tbody>
</table>

(Surface finish: No. 2D, Thickness: 1.0mm)

**Formability**

[Cup drawing formability]

Thickness : 1.5mm
Blank diameter : 90mmφ, Punch diameter: 50mmφ
Drawing depth : 25mm

[Multi-stage cup drawing formability]

Thickness : 0.8mm
Lubricant: Johnson-Wax®122
Initial blank diameter : 96mmφ
Punch diameter : 48mmφ (1st stage) - 22mmφ (7th stage)

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Seven-stage drawings (drawing ratio: 4.4)
Blank holding force : 5ton

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Two-stage drawings (drawing ratio: 2.2)

[Shape-fixability in hat bending]

Thickness : 0.8mm
Forming height : 70mm
Blank holding force : 5ton

NSSC 304JS/SUS 304

(NSSC 304JS exhibits a minimal spring back after press forming.)