

# HASTELLOY<sup>®</sup> G-35<sup>®</sup> alloy

## Resistance to Stress Corrosion Cracking

One of the chief attributes of the nickel alloys is their resistance to chloride-induced stress corrosion cracking. A common solution for assessing the resistance of materials to this extremely destructive form of attack is boiling 45% magnesium chloride (ASTM Standard G 36), typically with stressed U-bend samples. As is evident from the following results, G-35<sup>®</sup> alloy is much more resistant to this form of attack than the comparative, austenitic stainless steels. The tests were stopped after 1,008 hours (six weeks).

<b>Alloy</b>	<b>Time to Cracking</b>
<b>316L</b>	2 h
<b>254SMO</b>	24 h
<b>28</b>	36 h
<b>31</b>	36 h
<b>G-30<sup>®</sup></b>	168 h
<b>G-35<sup>®</sup></b>	<b>No Cracking in 1,008 h</b>
<b>625</b>	No Cracking in 1,008 h

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