

LDX 2101 is a lean duplex stainless steel designed for general-purpose use. Like other duplex stainless steels LDX 2101 provides both superior strength and greater chloride stress corrosion cracking resistance compared to 300 series stainless steels.

The combination of a duplex structure and high nitrogen content provide significantly higher strength levels than 316L stainless steel. Often a lighter gage of LDX 2101 can be utilized to achieve the same strength levels of a 300 series fabrication. The resultant weight savings can drastically reduce the material and fabrication costs of a component.

### Chemical Composition, %

	Cr	Ni	Mn	Mo	Si	N	C	Cu	Fe	PRE <sub>N</sub> *
<b>LDX 2101®</b> UNS S32101	21.5	1.55	5.0	0.3	0.7	0.22	0.03	0.4	balance	26.0
<b>316/316L</b> UNS S31600, S31603	16.4	10.2	—	2.1	—	—	0.02	—	balance	23.3
<b>304/304L</b> UNS S30400, S30403	18.3	9.0	—	—	—	—	0.02	—	balance	18.3

$$*PRE_N = Cr + 3.3Mo + 16N$$

### ASME Section VIII Div 1 Maximum Design Allowable Stresses

Temperature	°F	200	300	400	500	600
<b>LDX 2101</b>	ksi	26.9	25.6	24.7	24.7	24.7
<b>316/316L</b>	ksi	20	20	19.3	18	17
<b>304/304L</b>	ksi	20	18.9	18.3	17.5	16.6

### Mechanical Properties

#### Tensile Properties - Cold Rolled Plate/Sheet > 0.25" thick

	Ultimate Tensile Strength, ksi	0.2% Offset Strength, ksi	Elongation, %	Hardness, Brinell
<b>LDX 2101</b>	94	65	30	290
<b>316/316L</b>	75	30	40	217
<b>304/304L</b>	75	30	40	201

#### LDX 2101 Minimum Tensile Properties - Elevated Temperatures

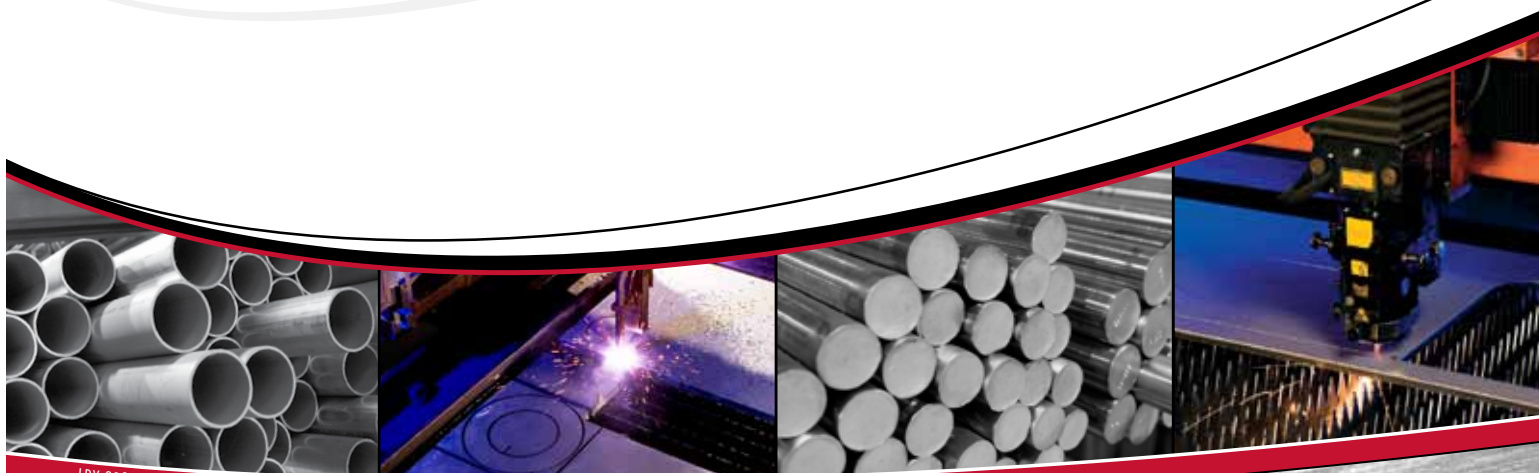
	Ultimate Tensile Strength, ksi	0.2% Offset Strength, ksi
<b>200°F</b>	86.2	55.7
<b>300°F</b>	81.3	50.8
<b>400°F</b>	78.3	47.6
<b>500°F</b>	78.3	46.1

#### Critical temperature for 0.005 inches per year (°C)

Solution	LDX 2101	316/316L
HCl - 1%	55	30
H <sub>2</sub> SO <sub>4</sub> - 10%	75	50
H <sub>2</sub> SO <sub>4</sub> - 96.4%	30	45



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LDX 2101 is a registered trademark of Outokumpu Stainless



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