

LEAN DUPLEX STEEL

LDX 2101 - 1.4162



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LDX 2101 is a lean duplex stainless steel that combines the beneficial properties of both ferritic and austenitic stainless steels, providing a balance of strength and corrosion resistance. It is referred to as "lean" because it has a reduced content of nickel and molybdenum compared to other duplex stainless steels, making it more cost-effective without significantly compromising performance.

KEY FEATURES

- Excellent resistance to general corrosion
- High strength
- Good toughness and ductility
- Ease of fabrication
- Post-weld properties

CHEMICAL PROPERTIES

| Chromium (Cr) | Manganese (Mn) | Nickel (Ni) | Molybdenum (Mo) | Silicone (Si) | Phosphorus (P) | Sulphur (S) | Carbon (C) | Nitrogen (N) | Iron (Fe) |
|---------------|----------------|-------------|-----------------|---------------|----------------|-------------|------------|--------------|-----------|
| 21-22% | 4-6% | 1.35-1.7% | 0.1-0.8% | 0.75% | 0.04% | 0.03% | 0.03% | 0.2-0.25% | rest |

MECHANICAL PROPERTIES

| | |
|---------------------------------------|---------|
| Tensile strength (N/mm ²) | 650-850 |
| Yield strength (N/mm ²) | 450 |
| Elongation (% in 4D) | 30 |
| Hardness - Rockwell (HRB) max | 95-100 |
| Hardness - Brinell (HB) max | 260 |

PHYSICAL PROPERTIES

| | | |
|---------------------------------------|-------------------|------|
| Density (kg/m ³) | 7800 | |
| Modulus of elasticity (Gpa) | 200 | |
| Mean coefficient of thermal expansion | 0-100°C (µm/m/°C) | 13.5 |
| | 0-350°C (µm/m/°C) | 14.1 |
| | 0-538°C (µm/m/°C) | 14.6 |
| Thermal conductivity | at 100°C (W/m.K) | 16.0 |
| | at 500°C (W/m.K) | 20.0 |
| Specific Heat 0-100°C (J/kg.K) | 500 | |
| Electrical resistivity (nΩ.m) | 800 | |
| Melting point (°C) | 1450 | |

MARKET SECTORS



Food & Beverage Industry

Processing equipment, storage tanks, piping, fittings



Chemical Processing

Storage tanks, pressure vessels, heat exchangers



Oil & Gas Industry

Offshore platforms, subsea equipment, piping



Desalination Components

Water treatment facilities, tanks, piping, fittings



Architectural Applications

Structural components, facades, reinforcements, cladding, bars



Automotive Industry

Exhaust systems, fuel tanks, bus frames, parts