

TECHNICAL DATA

# DELORO 38

## CHARACTERISTICS

Deloro 38 is a nickel-based hardfacing alloy from the portfolio of Deloro Wear Solutions, specifically developed for use in wear-intensive applications. It belongs to the Deloro® alloy family and is characterized by a balanced combination of wear resistance, toughness, and hardness.

Deloro 38 is nickel-based and available in powder form. On a five-point scale, the alloy offers the following performance characteristics: wear resistance (3/5), corrosion resistance (2/5), toughness (3/5), and hardness (3/5). These balanced ratings make Deloro 38 particularly suitable for applications where both wear protection and mechanical resilience are required.

Deloro 38 is compatible with several modern coating and welding processes, including laser cladding, Plasma Transferred Arc welding (PTA), and spray-and-fuse. This ensures flexible application depending on the specific requirements of each use case.

Deloro's nickel-based alloys are available in a hardness range of 20–60 HRC and provide optimized solutions for wear-critical components. Deloro 38 is especially well-suited for components subject to moderate to higher levels of friction and wear, such as those found in the pump and valve industry, the energy sector, or general mechanical and plant engineering.

## CHEMICAL PROPERTIES

PROPERTY	TEST RESULT	MIN	MAX
Carbon	0.01 %	0.07 %	n/a
Nickel	BALANCE		
Iron	0.06 %	0.80 %	n/a
Silicon	2.50 %	3.50 %	n/a
Boron	1.80 %	2.40 %	n/a
Oxygen	n/a	n/a	0.045 %



## PHYSICAL PROPERTIES

PROPERTY	TEST RESULT	MIN	MAX
Apparent density (Hall)	4.84 g/cm <sup>3</sup>	n/a	n/a
Typical hardness (HV30)	380 HV30	350	410 HV30

## SIEVE ANALYSIS

SIEVE	TEST RESULT	MIN	MAX
+ 125 Microns	0,00 %	n/a	0,00 %
+ 106 Microns	1,95 %	n/a	3 %
+ 71 Microns	22,95 %	n/a	n/a
+ 63 Microns	12,25 %	n/a	n/a
+ 53 Microns	12,12 %	n/a	n/a
+ 45 Microns	10,95 %	n/a	n/a
+ 36 Microns	12,29 %	n/a	n/a
+ 20 Microns	22,30 %	n/a	n/a
- 20 Microns	5,19 %	n/a	8 %

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