

- ▶ Product no.: 60051
- ▶ Data Sheet no.: 60051-22-1
- ▶ Composition: Ni-Cr-Mo-Nb-Ti-Al-Fe
- ▶ Size Fraction : -53 +20 μm

- ▶ General Characteristics
 - Plasma Atomized Material
 - Highly Spherical
 - High Density
 - High Purity
 - Low Porosity
 - Unique Flowability
 - Use for Oil and Gas Applications

Technical Specifications

▶ Particulate Size Distribution

Sieve Analysis (ASTM-B214) - μm , wt%

Size	Min	Max
+53	-	5.0
+63	-	1.0
+75	-	0.0

Laser Scattering (ASTM-B822) - vol%, μm

Size	Min	Max
-20 μm	-	10%
D10	FIO	FIO
D50	FIO	FIO
D90	FIO	FIO

▶ Density & Flow

Apparent Density (ASTM-B212):	$\geq 4.15 \text{ g/cm}^3$
Tap Density (ASTM-B527):	$\geq 5.0 \text{ g/cm}^3$
Hall Flow Test (ASTM-B213):	$\leq 15 \text{ sec/50g}$

▶ Chemical Composition¹

Base Elements:

Nickel (Ni):	50.00 – 55.00 %	Titanium (Ti):	0.65 – 1.15 %
Chromium (Cr):	17.00 – 21.00 %	Aluminum (Al):	0.20 – 0.80 %
Molybdenum (Mo):	2.80 – 3.30 %	Iron (Fe):	Balance
Niobium (Nb):	4.75 – 5.40 %		

Residual Elements:

Carbon (C) :	$\leq 0.080 \%$	Copper (Cu):	$\leq 0.30 \%$
Cobalt (Co):	$\leq 1.00 \%$	Oxygen (O):	$\leq 0.015\%$
Manganese (Mn):	$\leq 0.35 \%$	Tantalum (Ta):	$\leq 0.05\%$
Silicon (Si):	$\leq 0.35 \%$	Nitrogen (N):	$\leq 0.025\%$
Phosphorus (P):	$\leq 0.015 \%$	Hydrogen (H):	$\leq 0.005\%$
Sulfur (S):	$\leq 0.015 \%$	Other, each:	$\leq 0.10\%$
Boron (B):	$\leq 0.006 \%$	Other, total:	$\leq 0.50\%$

¹Chemical composition is compliant with most Industry Standards, such as: UNS N07718, DIN 2.4668, ASTM F3055