

HA 6137-3

Mo-NiCrFeSiB Blend

Product Code: 246137-3
Technical Data Sheet

Revision: # 000
 Dated: 08/08/08

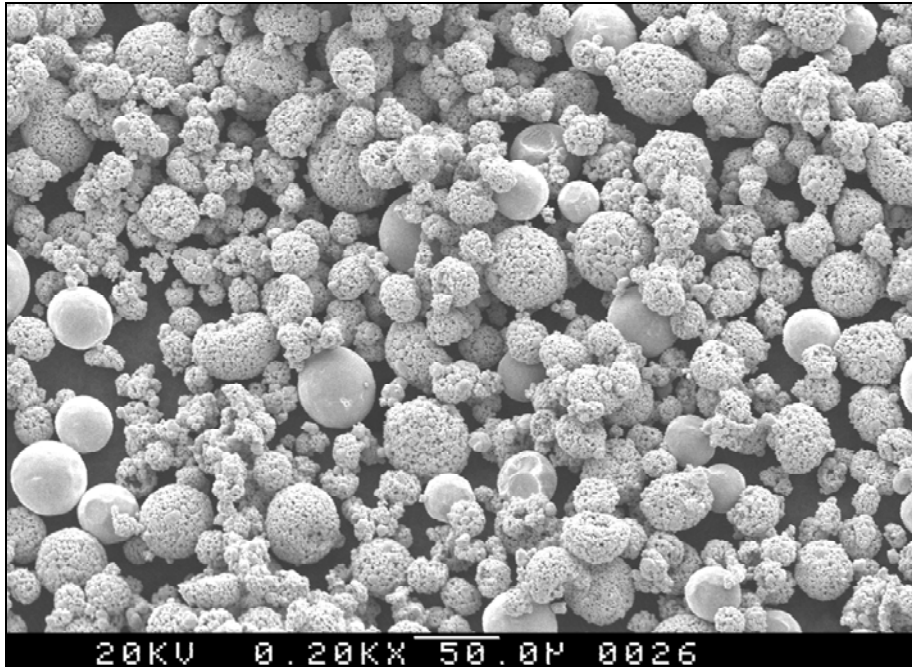


Figure 1: Typical Powder Morphology (SEM 200X)

1. PHYSICAL PROPERTIES

HA 6137-3 is a special blend of fine 75% molybdenum powder and 25% fine self-fluxing, nickel-chromium alloy.

Formula	75 Mo / 25 NiCrFeSiB
Name	Molybdenum / Nickel self-fluxing Alloy
Product Description	Blended
Melting Point [°C] Molybdenum Nickel Chromium Alloy	2,610 1,025
Apparent Density (typical) [g/cm³] ASTM B212	2.8
Hall Flow (typical) [sec/50g] ASTM B213	30 - 50

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2. CHEMICAL PROPERTIES

2.1. Typical Chemical Analysis

Mo		NiCrFeSiB	
Element	Weight Percent	Element	Weight Percent
Mo	> 99.4 %	Ni	Balance
Fe	< 0.1 %	Cr	13 – 20 %
Si	< 0.1 %	Fe	3 – 6 %
C	< 0.2 %	Si	3 – 5 %
O	< 0.2 %	B	2.75 – 5 %
		C	0.6 – 1.3 %

3. POWDER MORPHOLOGY AND PARTICLE SIZE DISTRIBUTION

3.1. Powder Morphology

- 3.1.1. Powder has spherical shape as produced by agglomeration and atomization processes.
- 3.1.2. Typical Powder Morphology using SEM is shown in Figure 1.

3.2. Particle Size Distribution

- 3.2.1. The typical powder size range measured with Tyler according to ASTM B214 is -325 mesh +10 µm
- 3.2.2. Table 1 shows the required and typical particle size distribution measured with Microtrac according to ASTM B822
- 3.2.3. Figure 2 shows the typical Microtrac particle size distribution graph

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Table 1: Typical and Required Microtrac Particle Size Distribution

<u>Percentile</u>	<u>Typical Particle Size</u>		<u>Mean</u>	<u>Required Particle Size</u>
[%]	[μm]			
0.01	6.56		D ₁₀	10 - 15 μm
5.00	11.01			
10.00	12.99			
16.00	14.55		D ₅₀	20 - 25 μm
50.00	20.26			
84.00	27.98			
90.00	31.04		D ₉₀	30 - 35 μm
95.00	35.72			
99.99	52.21			

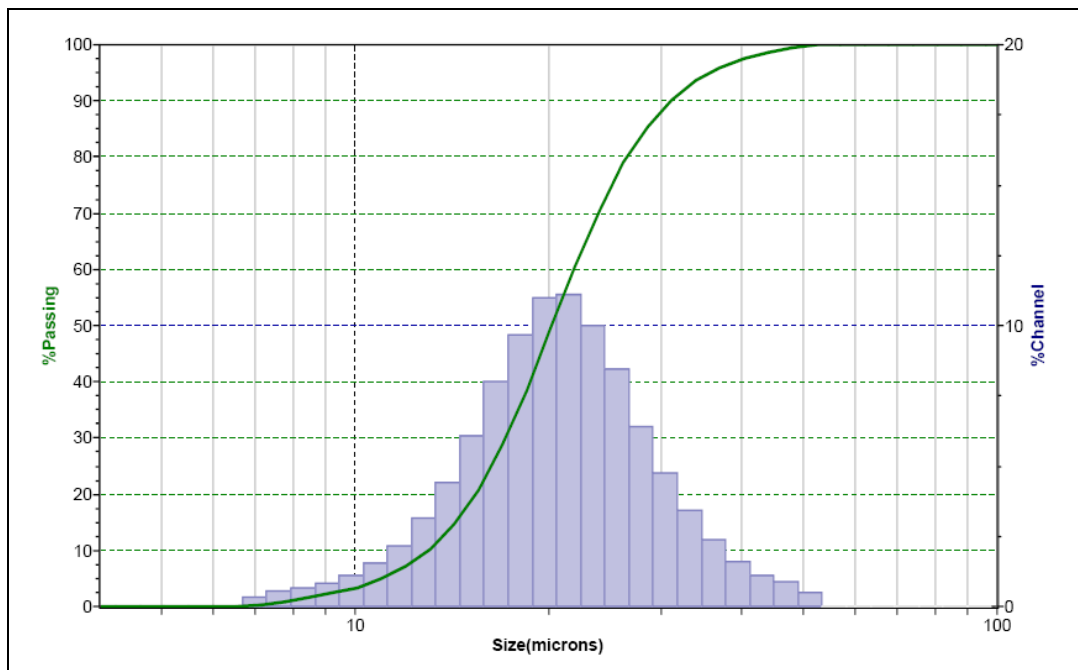


Figure 2: Typical Microtrac Particle Size Distribution