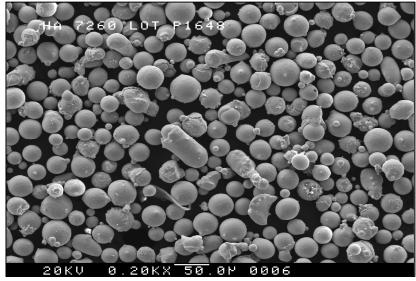


HA 7260

Product Code: 257260 Technical Data Sheet Revision: # 002 Dated: 01/01/09





## PHYSICAL PROPERTIES

**HA 7260** is a Gas Atomized Nickel Chrome Alloy Powder. In applications where fuel ashes and/or deposits are encountered, higher chromium content alloys are more suitable. The nickel chrome system shows that chromium is quite soluble in nickel up to 47%. Oxidation resistance can be attributed to the formation of a highly adherent protective scale; typically a mixture of oxides of NiO and  $Cr_2O_3$ ; further these combine to form nickel chromite Ni $Cr_2O_4$ . **HA 7260** coatings as sprayed have a typical hardness range of 40 – 50 R<sub>c</sub>. Wear mechanisms are quite complex, but high hardness and good corrosion resistance contribute to good wear resistance.

Molecular Formula	Ni 50Cr		
Melting Point [°C]	Approx. 1,550		
Hall Flow [s/50g] ASTM B213	15 - 20		
Apparent Density [g/cm <sup>3</sup> ] ASTM B212	4.1 – 4.3		



HA 7260

Product Code: 257260 Technical Data Sheet Revision: # 002 Dated: 01/01/09

## **CHEMICAL PROPERTIES**

Element	С	Si	Mn	Р	S	Cr	Ni	AI	Ν	Fe
% max	0.10	1.00	0.20	0.007	0.008	50.00	55.00	0.00	0.24	3.00
% min	0.01	0.60	0.00	0.005	0.004	42.00	48.00	0.00	0.15	2.50

## POWDER MORPHOLOGY AND PARTICLE SIZE DISTRIBUTION

#### 1. Powder Morphology

1.1 Powder has a spherical shape as produced by the gas atomization process

1.2 Typical Powder Morphology using SEM is shown in Figure 1.

#### 2. Particle Size Distribution

- 2.1 Table 1, shows the typical powder size range measured with Tyler according to ASTM B214.
- 2.2 Table 2, shows the required and typical particle size distribution measured with Microtrac according to ASTM B822.

Mesh Size	Particle Size	Maximum Percentage	Minimum Percentage	
+170	+88 μm	2		
-200	-74 µm	99	97	
-230	-63 µm	97	70	
-325	-45 µm	70	55	
-550	-22 μm	2		

#### Table 1: Cumulative Volume Percentage



# HA 7260 Ni 50Cr

Product Code: 257260 Technical Data Sheet Revision: # 002 Dated: 01/01/09

Percentile	Particle Size	Mean	Required Particle Size	
10 %	27.63 µm			
20 %	31.67 µm	D <sub>10</sub>	25 - 35 μm	
30 %	34.74 µm			
40 %	37.55 μm		35 - 45 μm	
50 %	40.30 µm	D <sub>50</sub>		
60 %	43.25 µm			
60 %	46.68 µm			
70 %	51.03 µm	D <sub>90</sub>	60 - 70 μm	
80 %	58.01 µm			
90 %	64.73 µm			

### Table 2: Typical Microtrac Analysis