

NICKEL POWDER S-GRADE

Indicative Specification Sheet



Nickel Powder S-Grade

Standard Packaging

250 kg net enamel lined steel drum; 5.9 kg drum tare weight
6 drums per 30" x 44" pallet

Table 1 Chemical Analysis Specifications

Element	Specification wt%	Average wt% ¹	Maximum wt% ¹
Nickel ²	99.8 Min	99.88	99.82 Min
Carbon	0.02 Max	0.006	0.009
Cobalt	0.15 Max	0.086	0.137
Copper	0.01 Max	0.001	0.009
Iron	0.01 Max	0.002	0.005
Sulphur	0.03 Max	0.023	0.03
Zinc	--	0.0022	0.0042

¹ For purposes of determining conformance with these specifications, an observed value shall be rounded "to the nearest unit" in the last right-hand digit used in expressing the specification limit, in accordance with the rounding method of ASTM Practice E29, for Using Significant Digits in Test Data to Determine Conformance with Specifications.

² Determined by difference (100% less C, Co, Cu, Fe, and S content) For the period from 01-Oct-2018 to 30-Sep-2020.

Table 3 Screen Analysis Specification

Tyler Screen Size	Particle Size µm	Specification wt%
-28 mesh	-600	100.0 Min
-200 mesh	-75	20.0 Min to 50.0 Max
-325 mesh	-45	25.0 Max

Shipped from Canada

Table 2³ Trace Elements
Oct. 1, 2018 – Sep. 30, 2020

	Average wt%	Maximum wt%
Aluminum	0.00304	0.00419
Antimony	<0.00001	<0.00001
Arsenic	0.00005	0.00008
Bismuth	<0.00001	<0.00001
Boron	<0.00007	0.00020
Cadmium	0.00048	0.00070
Calcium	<0.0001	<0.0001
Chromium	0.00011	0.00022
Gallium	<0.00001	<0.00001
Indium	<0.00001	<0.00001
Lead	<0.00001	<0.00001
Magnesium	<0.00005	<0.00005
Manganese	<0.00005	0.00007
Mercury	<0.00002	<0.00002
Molybdenum	0.00014	0.00100
Phosphorus	<0.0005	<0.0005
Selenium	0.00050	0.00092
Silicon	<0.0003	<0.0003
Silver	<0.00001	<0.00001
Tantalum	<0.00001	<0.00001
Tellurium	<0.00001	<0.00001
Thallium	0.00002	0.00004
Thorium	<0.00001	<0.00001
Tin	<0.00001	<0.00001
Titanium	<0.00001	0.00001
Tungsten	<0.00001	<0.00001
Uranium	<0.00001	<0.00001
Vanadium	<0.00001	<0.00001

³ The above analyses are provided for informational purposes only. A sample from the powder feed from which the nickel briquettes and powders is produced is taken every 6 hours. The data provided is taken from analysis of weekly and monthly composites of this sample.