

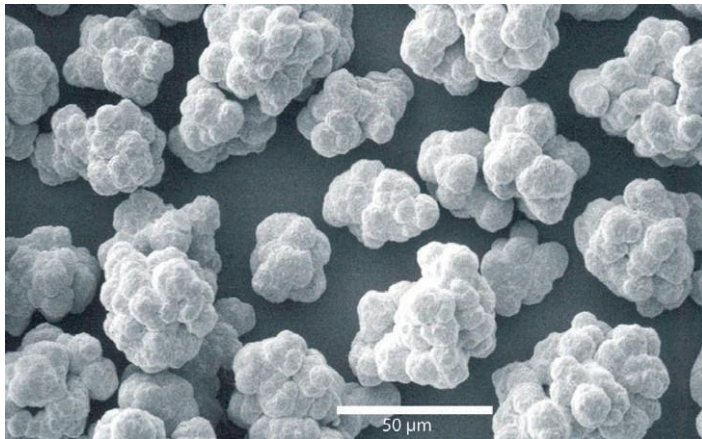
E-Fill 1231, 1233 and 1235

Conductive Grade Autoclaved Nickel Powder

Oerlikon Metco has been producing consistent high quality nickel powders and composites for over 35 years. Our E-fill nickel powders are well suited for use in electronic applications such as fillers for conductive polymer composites. The nickel particles are spheroidal in shape with nodular features that provide excellent balance between conductive and rheology characteristics.

Oerlikon Metco's hydrometallurgical production method produces high purity nickel powders and nickel-based composite powders by designed processes that ensure consistent and controllable particle shape and surface morphology.

Our highly controllable production method coupled with our extensive sizing and blending operations our production technology and quality testing ensures every lot will surpass your application requirements.



SEM micrograph showing typical size, shape and surface morphology of Oerlikon Nickel Powder

Chemical Analysis

Component	Specification wt. %
Nickel + Cobalt	99.6 min.
Cobalt	0.15 max.
Copper	0.02 max.
Iron	0.05 max.
Sulphur	0.03 max.
Carbon	0.15 max.

Laser Diffraction Analysis

	Typical Value Microns (µm)		
	1231	1233	1235
D10	30 ± 5	27 ± 10	18 ± 5
D50	40 ± 5	44 ± 5	27 ± 5
D90	55 ± 5	65 ± 10	42 ± 10

Tyler Screen Analysis

Parameter	Effective Opening (µm)	Specification (wt. %)	
		1231	1233
+270	+63	3 max.	3 max.
-270 +325	-63 +45	15 max.	
+400	+38		5 max.
-400	-38		50 max.
-10 microns*	-10*	3 max.	

* Measurement by Laser Light Diffraction (Microtrac)

Additional Information

Apparent Density Hall (ASTM B212)	1231: 3.2 to 3.5 g/cm ³ typical
	1233: 2.7 to 4.6 g/cm ³ typical
	1235: 2.2 to 3.8 g/cm ³ typical
Standard Packaging	25 kg net in plastic pails