HORIBA Scientific

Application Note

316 Stainless Steel Metal Powder

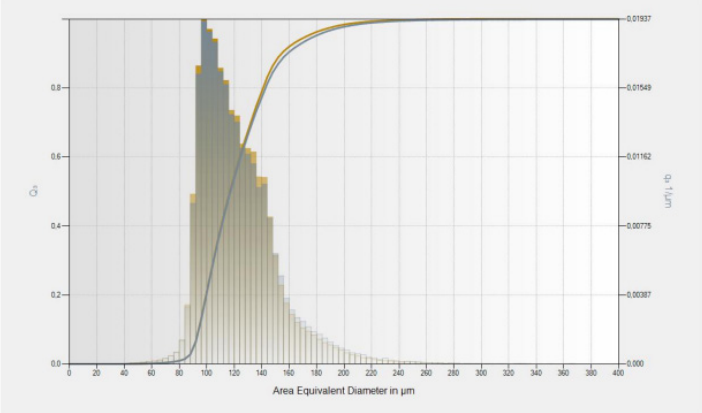
AN249

Summary

316 Stainless steel, a grey or silver powder, is an iron based alloy. It has high temperature resistance and high corrosion resistance. This alloy is often Fe (65-72%) combined with Cr (16-18%), Ni (10-14%) and Mo (2-3%). 316 stainless is often used in metal injection molding (MIM). Products produced can be found in car parts like ignition locks and fuel injectors. In aerospace it is used in fittings and nozzels. It can be found in medical implants and electrical devices like solenoids. It can also be used in additive manufacturing (3D printing).

The particle size of SS316 powder is important to final product uses like injection molding. Here the metal must not clog the injector, so a uniform size with no large particles is important, and the metal must melt evenly throughout the molding for the best end product, again a uniform size and shape is important.

Analytical test method dry
Sample amount: 1 gram
Covered area: 0.5%
Feeder Speed: 20
Measurement Model: Area equivalent diameter
Number of particles: 100,000
Feeder Width: 20mm
Objective: 0.35x



Example dry data 2 repeat runs
Median 1: 116.8 µm
D(10%): 93.9 µm D(90%): 154.7 µm

Median 2: 117.4 µm
D(10%): 93.7 µm D(90%): 159.2 µm