Ammonium Hydroxide
VLSI

Material No.: 5358-03
:
Revision No.: 0

Product Specification

Test	Specification
Appearance	Passes Test
Assay (as NH_3)	28,0 - 30,0 %
Color (APHA)	≤ 10
Insoluble Matter	≤ 1 ppm
Residue after Ignition	≤ 3 ppm
Carbon Dioxide (CO_2)	≤ 10 ppm
Pyridine	Passes Test
Substances Reducing Permanganate	Passes Test
Chloride (Cl)	≤ 0,3 ppm
Phosphate (PO_4)	≤ 0,20 ppm
Total Sulfur (as SO_4)	≤ 0,8 ppm
Trace Impurities - Aluminum (Al)	≤ 10,0 ppb
Arsenic and Antimony (as As)	≤ 30,0 ppb
Trace Impurities - Barium (Ba)	≤ 10,0 ppb
Trace Impurities - Beryllium (Be)	≤ 10,0 ppb
Trace Impurities - Bismuth (Bi)	≤ 20,0 ppb
Trace Impurities - Boron (B)	≤ 10,0 ppb
Trace Impurities - Cadmium (Cd)	≤ 5,0 ppb
Trace Impurities - Calcium (Ca)	≤ 100,0 ppb
Trace Impurities - Chromium (Cr)	≤ 5,0 ppb
Trace Impurities - Cobalt (Co)	≤ 1,0 ppb
Trace Impurities - Copper (Cu)	≤ 10,0 ppb
Trace Impurities - Gallium (Ga)	≤ 50 ppb
Trace Impurities - Germanium (Ge)	≤ 50,0 ppb
Trace Impurities - Gold (Au)	≤ 10,0 ppb
Heavy Metals (as Pb)	≤ 200,0 ppb
Trace Impurities - Iron (Fe)	≤ 10,0 ppb
Trace Impurities - Lead (Pb)	≤ 10,0 ppb

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For questions on this Product Specification please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone 610.386.1700

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Trace Impurities - Lithium (Li)	≤ 20,0 ppb
Trace Impurities - Magnesium (Mg)	≤ 50,0 ppb
Trace Impurities - Manganese (Mn)	≤ 5,0 ppb
Trace Impurities - Mercury (Hg)	≤ 5,0 ppb
Trace Impurities - Molybdenum (Mo)	≤ 10,0 ppb
Trace Impurities - Nickel (Ni)	≤ 5,0 ppb
Trace Impurities - Niobium (Nb)	≤ 10,0 ppb
Trace Impurities - Potassium (K)	≤ 100 ppb
Trace Impurities - Silicon (Si)	≤ 150,0 ppb
Trace Impurities - Silver (Ag)	≤ 5,0 ppb
Trace Impurities - Sodium (Na)	≤ 100,0 ppb
Trace Impurities - Strontium (Sr)	≤ 10,0 ppb
Trace Impurities - Tantalum (Ta)	≤ 10,0 ppb
Trace Impurities - Thallium (Tl)	≤ 50,0 ppb
Trace Impurities - Tin (Sn)	≤ 20,0 ppb
Trace Impurities - Titanium (Ti)	≤ 10,0 ppb
Trace Impurities - Vanadium (V)	≤ 20,0 ppb
Trace Impurities - Zinc (Zn)	≤ 5,0 ppb
Trace Impurities - Zirconium (Zr)	≤ 10,0 ppb
Particle Count - 0.5 µm and greater	≤ 100 par/ml
Particle Count - 1.0 µm and greater	≤ 10 par/ml

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For Microelectronic Use
Reported value is the average of all samples counted for this lot number,with no individual sample value exceeding the specification.

Packaging Site: Phillipsburg Mfg Ctr & DC