

Product Specification

High Purity 1.7 Molar VRB Electrolyte



CHEMISTRY

Elements	
Vanadium Molarity	1.68 – 1.72 mol/L
Vanadium Valence	3.48 – 3.5
Density	1.35 – 1.38 g/cc
Sulfuric Acid Molarity	4.1 – 4.4 mol/L
Silver (Ag)	<0.05 mg/L
Aluminum (Al)	<40 mg/L
Arsenic (As)	<0.25 mg/L
Gold (Au)	<0.1 mg/L
Bismuth (Bi)	<0.2 mg/L
Calcium (Ca)	<30 mg/L
Cobalt (Co)	<0.1 mg/L
Chromium (Cr)	<17 mg/L
Copper (Cu)	<0.5 mg/L
Iron (Fe)	<60 mg/L
Iridium (Ir)	<0.01 mg/L
Potassium (K)	<20 mg/L
Lithium (Li)	<5 mg/L

CHEMISTRY (Continued)

Magnesium (Mg)	<20 mg/L
Manganese (Mn)	<5 mg/L
Molybdenum (Mo)	<20 mg/L
Sodium (Na)	<50 mg/L
Nickel (Ni)	<5 mg/L
Osmium (Os)	<0.01 mg/L
Lead (Pb)	<1 mg/L
Palladium (Pd)	<0.2 mg/L
Platinum (Pt)	<0.2 mg/L
Rhenium (Re)	<0.01 mg/L
Rhodium (Rh)	<0.01 mg/L
Ruthenium (Ru)	<0.01 mg/L
Antimony (Sb)	<0.5 mg/L
Silicon (Si)	<15 mg/L
Tin (Sn)	<0.5 mg/L
Titanium (Ti)	<30 mg/L
Thallium (Tl)	<1 mg/L
Zinc (Zn)	<3 mg/L

VRB Electrolyte is a high-purity product used in vanadium redox batteries (VRB) as an energy storing liquid. VRB Electrolyte is produced at our ISO 9001:2015 certified Hot Springs, Arkansas facility.

This specification is for US Vanadium's 1.7 Molar VRB Electrolyte. Other Electrolyte compositions can be made to meet specific customer needs upon request.

Std Packaging – 330 Gallon PE IBC Totes

Specification No. MC23 Revision No. 3

Issue Date: 11/08/22 Revision Date: 01/27/26

Director of Technology Approval



Quality Manager Approval

