

Technical Data Sheet

Vanadium Electrolyte (1.6 mol/L) For Vanadium Redox Batteries

Hazard information			
UN Number	3264	EC Number	949-084-9
Proper Shipping Name	Corrosive Liquid, Acidic, Inorganic, N.O.S	CAS Number	123334-20-3
Eu Reach Number	01-2120788684-35-XXXX	Hazard Class	8
KKID Reach Number	01-0000528738-66-XXXX		
Tariff Number	28332990	Packaging group	III

Electrolyte Composition			
Molecular formula	VOSO ₄ /V ₂ (SO ₄) ₃		
Physical Appearance	Dark Blue/Green Solution		
Specification			
Component	Lower Limit	Nominal	Upper Limit
Total Vanadium (mol/L)	1.55	1.6	1.65
Vanadium as V (iii) (%)	47.5	50	52.5
Vanadium as V (iv) (%)	52.5	50	47.5
Vanadium (iii) mol/L	0.76	0.80	0.84
Vanadium (iv) mol/L	0.84	0.80	0.76
Vanadium (iii) to (IV) Ratio	0.90	1.00	1.10
Total Sulphate (mol/L)	4.10	4.20	4.30
Density	1.35	1.36	1.37
Phosphoric Acid (mol/L)	0.05 – 0.12 (Customer Specific)		

Packaging options:
220 Litre drums (300 kg)
1,000 Litre IBC (1360 kg)

Impurity Profile			
Element	Concentration (ppm)	Element	Concentration (ppm)
Ag	< 0.1	Mo	< 20
Al	< 50	Na	< 50
As	< 0.5	Ni	< 10
Au	< 0.1	Os	< 0.1
B	< 0.1	Pb	< 0.01
Ba	< 0.1	Pd	< 0.01
Be	< 1	Pt	< 0.01
Bi	< 1	Re	< 0.01
Ca	< 30	Rh	< 0.01
Cd	< 0.1	Ru	< 0.01
Cl	< 20	Sb	< 0.5
Co	< 35	Se	< 0.1
Cr	< 10	Si	< 5
Cu	< 1	Sn	< 1
Fe	< 70	Sr	< 0.1
Ir	< 0.04	Te	< 0.1
K	< 100	Ti	< 5
Li	< 0.1	Tl	< 1
Mg	< 20	Zn	< 1
Mn	< 5	Zr	< 0.5
NH ₄	< 500	SO ₂	< 3



Certificate no. 7984
ISO 9001
ISO 14001