

Technical Data Sheet

Vanadium Electrolyte (1.8 mol/L) For Vanadium Redox Batteries

Hazard information

UN Number:	3264	EC Number:	1272/2008 (CLP)
Proper Shipping Name:	Corrosive Liquid, Acidic, Inorganic, N.O.S	Hazard Class:	8
Reach Number:	949-084-9	Packaging group:	III
Tariff Number:	28332990		

Electrolyte Composition

Molecular formula:	VOSO ₄ /V ₂ (SO ₄) ₃		
Physical Appearance:	Dark Blue/Green Solution		
Specifications:			
Component:	Lower Limit:	Nominal:	Upper limit:
Total Vanadium (mol/L):	1.75	1.80	1.85
Vanadium as V (iii) (%):	47.5	50	52.5
Vanadium as V (iv) (%):	52.5	50	47.5
Vanadium (iii) mol/L	0.86	0.90	0.95
Vanadium (iv) mol/L	0.95	0.90	0.86
Vanadium (iii) to (IV) ratio	0.99	1.00	1.10
Total Sulphate (mol/L):	4.10	4.20	4.30
Density:	1.37	1.38	1.39
Phosphoric Acid (mol/L):	0.05 – 0.12 (Customer Specific)		

Impurity Profile

Element	Concentration (ppm)	Element	Concentration (ppm)
Ag	< 0.1	Mo	< 20
Al	< 50	Na	< 50
As	< 0.5	Ni	< 1
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	< 15	Se	< 0.1
Cr	< 10	Si	< 5
Cu	< 0.2	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

Packaging options:
220 Litre drums (260 Kg)
1,000 Litre IBC (1360 Kg)

Certificate no. 7984
ISO 9001
ISO 14001

