

## ULTRA PURE 98% SULPHURIC ACID (VLSI)

**CAS No.** 007664-93-9 **EC No.** 231-639-5

### Alternative names:

Sulphuric acid concentrated, Sulfuric acid, Brown Oil of Vitriol (BOV), Rectified Oil of Vitriol (ROV)

INEOS Enterprises produce a range of sulphuric acid and related sulphur chemicals at its Runcorn site in the UK. Ultra pure 98% sulphuric acid finds application as an etching agent for the production of semi-conductors for the electronic industry and as a laboratory chemical.

VLSI is a semi-conductor grade quality for the electronics industry.

### Specifications

Parameter	Units	Lower Limit	Upper Limit
Sulphuric Acid	% w/w	97.0	99.0
Colour	Hazen	0	10
Iron (Fe)	ppb w/w	0	50
Residue on Ignition	ppm w/w	0	3
Reducing Substances as SO <sub>2</sub>	ppm w/w	0	1
Oxides of Nitrogen (Nox)	ppm w/w	0	0.2
Ammonia (NH <sub>3</sub> )	ppm w/w	0	0.5
Chloride (Cl)	ppm w/w	0	1
Phosphate	ppm w/w	0	0.2
Sb, As	ppb w/w	0	< 5 ppb per metal listed
Ba, Be, B, Cd, Cr, Co, Cu, Ga, Ge, In, Pb, Li, Mn, Mo, Ni, Nb, Pt, Se, Ag, Sr, Ta, Ti, V, Zr	ppb w/w	0	< 10 ppb per metal listed
Al, Bi, Au, Mg, Sn, Tl	ppb w/w	0	< 20 ppb per metal listed
Ca, K, Zn	ppb w/w	0	< 50 ppb per metal listed
Na	ppb w/w	0	< 100 ppb per metal listed
Particles greater than 0.5 micron max	particles/ml	0	600

Specification reference: VLSI 98%/REV1

Information in this publication is believed to be accurate and is given in good faith, but it is for the customer to satisfy itself of the suitability for its own particular purpose. Accordingly, INEOS Enterprises Limited gives no warranty as to the fitness of the product for any particular purpose and any implied warranty or condition (statutory or otherwise) is excluded except to the extent that such exclusion is prevented by law. Freedom under Patent, Copyright and Designs cannot be assumed. INEOS™ is a trade mark, the property of INEOS Capital Limited. The "Bubble Logo", CERECOLOR™, MEFLEX™, METHOKLONE™, PERKLONE™, SODAGRAIN™, SODASTRAW™, TRIKLONE™ and TRISEC™ are trade marks, the property of INEOS Chlor Limited. BICHLOR™, CEREPAS™, CHLORCOAT™, FM™ and PEMcoat™ are trade marks, the property of INEOS Enterprises Limited.

## Typical Physical Properties

Parameter	Conditions	Units	Typical Value
Form	-	-	Liquid
Boiling point	-	°C	323
Melting point	-	°C	-1.3
Vapour pressure	20°C	mm Hg	<0.001
Density	20°C	g/ml	1.836
Solubility in water	-	-	Soluble with evolution of heat

## Health and Safety

Sulphuric acid is corrosive and causes severe skin burns and eye damage. Refer to the Material Safety Data Sheet for further information.

## Delivery

Ultra pure 98% sulphuric acid is supplied in dedicated iso-tanks only.

## Enquiries

For further information, please contact your customer service representative.

[www.ineosenterprises.com](http://www.ineosenterprises.com)

**Issue Date : September 2012**

Specification reference: VLSI 98%/REV1

Information in this publication is believed to be accurate and is given in good faith, but it is for the customer to satisfy itself of the suitability for its own particular purpose. Accordingly, INEOS Enterprises Limited gives no warranty as to the fitness of the product for any particular purpose and any implied warranty or condition (statutory or otherwise) is excluded except to the extent that such exclusion is prevented by law. Freedom under Patent, Copyright and Designs cannot be assumed. INEOS™ is a trade mark, the property of INEOS Capital Limited. The "Bubble Logo", CERECOLOR™, MEFLEX™, METHOKLONE™, PERKLONE™, SODAGRAIN™, SODASTRAW™, TRIKLONE™ and TRISEC™ are trade marks, the property of INEOS Chlor Limited. BICHLOR™, CEREPAS™, CHLORCOAT™, FM™ and PEMcoat™ are trade marks, the property of INEOS Enterprises Limited.