

PRODUCT SPECIFICATION: SPE.PROD.0018

Section 1 – GENERAL	
Product Name:	Sulphur Dioxide, Liquid
Description:	Liquefied sulphur dioxide (SO ₂) kept under pressure, is a clear, colourless liquid with a suffocating odour.
Properties:	Boiling point at 101,3 kPa : - 10 °C Freezing point : - 75,5 °C Critical temperature : 157,12 °C Critical pressure : 7,86 MPa Latent heat of vaporisation : 346 kJ/kg Vapour density (air = 1) : 2,26
Toxicity:	The material is highly toxic (Rating 3 according to "Dangerous Properties of Industrial Materials"). The probable lethal dose to humans is 50 to 500 mg/kg body mass TLV-TWA : 5,2 mg/m ³ TLV-STEL : 13 mg/m ³
Hazards:	Liquid sulphur dioxide causes burns on the skin and eyes. The vapour is extremely irritating and suffocating.
Special Precautions:	Full protective clothing, goggles and a gas mask must be worn when handling liquid sulphur dioxide. As the material vaporises at atmospheric pressure and temperature, it must be stored in gas-tight containers under pressure and in a cool, dry place.
Statutory Aspects:	UN 1079. Transported as Dangerous Good. Chemical Initiatives (Pty) Ltd: Material Safety Data Sheet. Occupational Health and Safety Act, No:85 OF 1995

Section 2 – SPECIFICATION	
Appearance:	The material is a clear, colourless liquid under pressure, free from visible impurities.
Strength:	Not less than 99,90 % (m/m) as SO ₂

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Oil:	Not more than 100 p.p.m. (m/m)
Residue on evaporation:	Not more than 100 p.p.m. (m/m)
Sulphuric Acid:	Not more than 100 p.p.m. (m/m)
Arsenic:	Not more than 3 p.p.m. (m/m) as As
Lead:	Not more than 5 p.p.m. (m/m) as Pb
Zinc:	Not more than 25 p.p.m. (m/m) as Zn
Copper and Zinc:	Not more than 50 p.p.m. (m/m)
Selenium:	Not more than 10 p.p.m. (m/m) as Se
Mercury:	Not more than 1ppm (m/m) as Hg
Heavy Metals:	Not more than 10 ppm (m/m) as Pb

Section 3 – TESTING

The material is sampled and tested according to the most recent editions of the Sampling Procedures and Analytical Schedule respectively. The sample is tested to the most recent edition of the method specified.

<u>PARAMETER</u>	<u>METHOD NO.</u>
3.1 Appearance	Umbog. 79
3.2 Strength	"
3.3 Oil	"
3.4 Residue on Evaporation	"
3.5 Sulphuric Acid	"
3.6 Arsenic	"
3.7 Lead	"
3.8 Zinc	"
3.9 Copper and Zinc	"
3.10 Selenium	"
3.11 Mercury	"
3.12 Heavy metals	"

This product is manufactured and tested at: Umbogintwini Factory.

Section 4 – PACKING

Cylinders, drums and ISO tainers

Section 5 – DOCUMENTATION

This specification is based on: Information from Umbogintwini Factory.

Section 6 – USES

As a bleaching and sterilising agent.
As a food preservative.
As an industrial chemical.

Section 7 – REASON FOR REVISION

June 2013 – New template