

**PRODUCT SPECIFICATION: SPE.PROD 0016**

<b>Section 1 – GENERAL</b>	
<b>Product Name:</b>	Caustic Soda Solution (48% to 51%)
<b>Description:</b>	Sodium hydroxide (NaOH), also referred to caustic soda is a clear to hazy, odourless liquid.
<b>Properties:</b>	Density at 15.6°C: 1,53 g/cm <sup>3</sup> Viscosity at 40°C: 0.06Ns/m <sup>2</sup> Boiling point at 101.3 kPa: 142°C Specific heat (20°C): 3.28 KJ/Kg °C
<b>Toxicity:</b>	<ul style="list-style-type: none"> <li>▪ Extremely corrosive, can result is severe skin burn and permanent eye damage.</li> <li>▪ TLV typically 2mg/m<sup>3</sup></li> </ul>
<b>Hazards:</b>	The material is corrosive and toxic; contact with the liquid will cause severe burns to the skin and eyes. Ingestion will result in severe internal damage, the material releases toxic fumes when heated or mixed with other chemicals.
<b>Special Precautions:</b>	Full protective clothing and a face shield must be worn when handling the material. Full respiratory protection gear must be worn if there is a potential of fumes being present. Ensure safety shower and eye wash facility is in close proximity of working areas.
<b>Statutory Aspects:</b>	UN 223. Transported as dangerous goods. Occupational Health and Safety Act, No:85 OF 1993

<b>Section 2 – SPECIFICATION</b>	
<b>Appearance</b>	The material is a clear or colourless liquid.
<b>Strength</b>	48-51% (m/m) as NaOH
<b>Iron as Fe</b>	< 10ppm (m/m)
<b>Zinc as Zn</b>	<1ppm (m/m)
<b>Chromium as Cr</b>	1ppm (m/m)

**PRODUCT SPECIFICATION: SPE.PROD 0016**

<b>Vanadium as V</b>	<10ppm (m/m)
<b>Nickel as Ni</b>	<1ppm (m/m)
<b>Copper as Cu</b>	<1ppm (m/m)
<b>Manganese as Mn</b>	<1ppm (m/m)
<b>Cadmium as Cd</b>	<1ppm (m/m)
<b>Sodium Carbonate as Na<sub>2</sub>CO<sub>3</sub></b>	5% max (m/m)
<b>Mercury as Hg</b>	<1ppm (m/m)

**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 33
3.2 Strength	UMBOG 33
3.3 Iron as Fe	UMBOG 33
3.4 Zinc as Zn	UMBOG 33
3.5 Chromium as Cr	UMBOG 33
3.6 Vanadium as V	UMBOG 33
3.7 Nickel as Ni	UMBOG 33
3.8 Copper as Cu	UMBOG 33
3.9 Manganese as Mn	UMBOG 33
3.10 Cadmium as Cd	UMBOG 33
3.11 Sodium Carbonate as Na <sub>2</sub> CO <sub>3</sub>	UMBOG 33
3.12 Mercury as Hg	UMBOG 33

**Section 4 – PACKING**

Bulk in Road Tankers

**Section 5 – DOCUMENTATION**

This specification is based on: Information from Umbogintwini Factory.

**PRODUCT SPECIFICATION: SPE.PROD 0016**

**Section 6 – USES**

In the production of soap and detergents  
As a scrubbing solvent  
In water treatment

**Section 7 – REASON FOR REVISION**

October 2013 – New template