



**Ranhill  
SAJ**

**SPECIFICATION FOR SODIUM HYDROXIDE  
(CAUSTICSODA) USED FOR POTABLE WATER  
SUPPLY**

MATERIAL REQUIREMENTS

**SPECIFICATION SAJ CH/ SHC/ 001  
(REV 3.0/09.2018)**

**Ranhill  
SAJ**

QUALITY ASSURANCE DEPARTMENT  
RANHILL SAJ SDN BHD

Ref. No. : CH/SHC/001

Date : 26/9/2018

Total Pages : 4/4

Approve by: .....  
Ass General Manager Quality Management

## SPECIFICATION FOR SODIUM HYDROXIDE (CAUSTIC SODA) USED FOR POTABLE WATER SUPPLY

### TABLE OF CONTENT

<b>Contents</b>	<b>Page</b>
<b>Table of Content</b>	<b>2</b>
1.0 General	3
2.0 Features required	3
3.0 Test and Inspection	3
4.0 Packing and Storage	4
5.0 Mandatory Marking	4
6.0 Pre-Delivery Inspection and Evaluation	4
7.0 Certification	4
<b>Table 1 Product Specification</b>	<b>3</b>
<b>Table 2 Physical Properties</b>	<b>3</b>



## SAJ SPECIFICATION FOR SODIUM HYDROXIDE (CAUSTIC SODA) USED FOR POTABLE WATER SUPPLY

### 1.0 General

- 1.1 This specification is applicable to Sodium Hydroxide used for potable water supply accordingly to Malaysian Standard, MS 700:1981 Specification for Sodium Hydroxide (Technical grades).
- 1.2 Features required for this specification are as follows or otherwise the above specification shall be applied.

### 2.0 Features required

- 2.1 Sodium Hydroxide used for Potable Water Supply shall comply with requirement as specified in **Table 1-Product Specification**.

**Table 1 – Product Specification**

Parameter		Type 1	Test Method
Sodium hydroxide content	%, min	46.0	Appendix B
Carbonate as Na <sub>2</sub> CO <sub>3</sub>	%, max	0.05	Appendix A
Chloride as NaCl	%, max	0.01	Appendix D
Sulphate Na <sub>2</sub> SO <sub>4</sub>	ppm, max	50	Appendix L
	%, max	-	Appendix F
Iron as Fe	ppm, max	20	Appendix G
Copper as Cu	ppm, max	1	Appendix H
Manganese as Mn	ppm, max	1	Appendix J
Silica as SiO <sub>2</sub>	ppm, max	20	Appendix K
Arsenic	ppm, max	1	Appendix M
Mercury	ppm, max	5	Appendix N or P

- 2.2 Physical properties of Sodium Hydroxide used for potable water supply as follows in **Table 2-Physical Properties**.

**Table 2 – Physical Properties**

No.	Physical Properties	Descriptions
1.	Appearance	i. Liquid ii. Clear, Colorless, odorless
2.	Density	i. 1.5 g/ml at 25°C

- 2.3 Sodium Hydroxide supplied shall not contain any impurities and additives.

### 3.0 Test and Inspection

- 3.1 All Sodium Hydroxide shall comply with test in accordance with the requirement of specification.

#### 4.0 Packing and Storage

- 4.1 Sodium Hydroxide shall be delivered in clean, dry and alkali-resistant containers.
- 4.2 For storage purpose, Sodium Hydroxide shall be stored in airtight containers in cool, dry and well ventilated room.

#### 5.0 Mandatory Marking

- 5.1 Each drum/cylinder of Sodium Hydroxide shall have mark legibly on it including:-
  - a) "Sodium Hydroxide" or "Caustic Soda", trade name and grade/type of material
  - b) Net mass of material
  - c) Name, address and telephone number or supplier and/or manufacturer
  - d) Lot of batch number, in code or otherwise
  - e) Date of manufacturing or packaging and shall bear such other markings as required by applicable laws
  - f) 'CAUTION' THE MATERIAL IS POISONOUS CORROSIVE.

#### 6.0 Pre-Delivery Inspection and Evaluation

- 6.1 It is the responsibility of the tenderer to inform SAJ Ranhill for inspection purposes during manufacturing and before delivery.
- 6.2 SAJ Ranhill reserve the right to inspect and witness the testing of the product offered without any prior notice.
- 6.3 At any time, when requested, the supplier is to provide SAJ Ranhill a sample of the product offered for evaluation purposes. All cost shall be borne by the supplier.
- 6.4 If at any time, the supplier fails to deliver the required sample, the product is deemed fail to meet the specification.

#### 7.0 Certification

- 7.1 Manufacturer and/or supplier of the product are required to provide the copy of the certificate and testing report from SIRIM, IKRAM and SPAN or other recognize certification bodies.
- 7.2 Tests report required should be those tests conducted within a year period.
- 7.3 SAJ has the right to refuse offer or reject supply if those documents required are not enclosed or results provided are not complied with SAJ Ranhill requirement.