



Ranhill SAJ

SPECIFICATION FOR SODA ASH (SODIUM CARBONATE) USED FOR POTABLE WATER SUPPLY

MATERIAL REQUIREMENTS

SPECIFICATION SAJ CH/ SC/ 001
(REV 4.0/09.2018)

QUALITY ASSURANCE DEPARTMENT
RANHILL SAJ SDN BHD

Ranhill

Approve by:	Ref. No.	: CH/SC/001
Ass General Manager Quality Management	Date	: 26/9/2018
	Total Pages	: 5/5

SPECIFICATION FOR SODA ASH (SODIUM CARBONATE) USED FOR POTABLE WATER SUPPLY

TABLE OF CONTENT

Contents	Page
Table of Content	2
1.0 General	3
2.0 Features required	3
3.0 Test and Inspection	4
4.0 Packing and Storage	4
5.0 Mandatory Marking	4
6.0 Certification of Analysis	5
7.0 Prer-delivery Inspection and Evaluation	5
8.0 Certification	5
Table	
Table 1 – Product Specification	3
Table 2 – Physical properties	4

Ranhill
SAJ

SPECIFICATION FOR SODA ASH (SODIUM CARBONATE) USED FOR POTABLE WATER SUPPLY

1.0 General

- 1.1 This specification is applicable to Soda Ash (Sodium Carbonate) Used for Potable Water Supply accordingly to Malaysian Standard, MS 1551:2002, Specification for Soda Ash (Sodium Carbonate) used for Potable Water Supply.
- 1.2 Features required for this specification are as follows or otherwise the above specification will be applied.

2.0 Features required

- 2.1 Soda Ash (Sodium Carbonate) used for potable water supply shall comply with requirement as specified in **Table 1-Product Specification.**

Table 1 – Product Specification

Parameter	Requirement	Test Method
A. Chemical Requirement		
Soda ash (as Na ₂ CO ₃), % w/w, min	99.0	<u>Appendix A</u>
B. Impurity		
	Limit	Test Method
Insoluble matter, % w/w, max	0.05	<u>Appendix B</u>
Iron, mg/kg of product, max	20	<u>Appendix C</u>
C. Physical requirement		
	Requirement	Test Method
Bulk density, g/mL	0.5 g/mL – 0.9 g/mL (light soda ash)	<u>Appendix D</u>
	0.9 g/mL – 1.1 g/mL (dense soda ash)	
D. Toxic substances		
	Limit, maximum	Test Method
Arsenic (As), as mg/kg of product	2	<u>Appendix E</u>
Cadmium (Cd), as mg /kg of product	2	
Chromium (Cr), as mg/kg of product	2	
Nickel (Ni), as mg/kg of product	2	
Lead (Pb), as mg/kg of product	2	
Mercury (Hg), as <u>µg/kg of product</u>	100	<u>Appendix F</u>

2.2 Physical properties of Soda ash (Sodium Carbonate) are as follows:

Table 2 – Physical properties

No.	Physical Properties	Descriptions
1.	Appearance	i. Dry
		ii. White powder
		iii. Free-flowing
2.	Solubility	i. 212 g/L (at 20°)
		ii. 332 g/L (at 35.4°)

2.3 Soda ash (Sodium Carbonate) shall contain not less than 99 percent, by weight Sodium Carbonate (Na₂CO₃).

2.4 Soda ash (Sodium Carbonate) supplied shall not contain any impurities and additives in such concentration that is capable of producing deleterious or injurious effects on the health of those consuming water that has been properly treated with the soda ash

3.0 Test and Inspection

3.1 All Soda ash (Sodium Carbonate) shall comply with test in accordance with the requirement of specification.

4.0 Packing and Storage

4.1 Soda ash (Sodium Carbonate) shall be delivered in a bulk bag or bag form.

4.2 For storage purposes, Soda ash (Sodium Carbonate) shall be store i n cool-dry and well ventilated area and separated from acids.

4.3 Avoid contact with strong mineral acids.

5.0 Mandatory Marking

Each bag of Soda ash (Sodium Carbonate) shall have mark legibly on it including:-

- a) "Soda ash (Sodium Carbonate)", trade name and grade/type
- b) Net weight
- c) Name, address and telephone number or supplier and/ or manufacturer
- d) Batch number
- e) Date of manufacturing/packaging and shall bear such other mar king as required by applicable law s.

6.0 Certificate of analysis

6.1 A certificate of analysis, with the indication of country of origin should accompany all deliveries for the chemical and be given to SAJ's.

6.2 The contents of the certificate of analysis shall include the following;

- a) Soda ash (as Na_2CO_3), % w/w
- b) Bulk density, g /mL
- c) Insoluble matter, % w/w

6.3 The contents of comprehensive certificate of analysis shall include the following;

- a) Soda ash (as Na_2CO_3), % w/w
- b) Bulk density, g /mL
- c) Insoluble matter, % w/w
- d) Iron, mg/kg of product
- e) Heavy metal (Ni,Cd,As,Cr,Pb) mg/kg of product
- f) Heavy metal (Hg), μg /kg of product

7.0 Pre-delivery Inspection and Evaluation

- a) It is the responsibility of the supplier to inform SAJ for inspection purposes during manufacturing and before delivery.
- b) SAJ reserve the right to inspect and witness the testing of product offered without any prior notice
- c) At anytime, when requested, the supplier is to provide SAJ a sample of the product offered for evaluation purposes. All costs shall be borne by the supplier.
- d) If at any time the supplier fails to deliver the required sample, the products is deemed fail to meet the specification.

8.0 Certification

- 8.1 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.
- 8.2 Tests report required should be those tests conducted within a year period.
- 8.3 SAJ has the right to refuse offer or reject supply if those documents required are not enclosed or results provided are not complied to SAJ requirement.