



**Ranhill  
SAJ**

**SPECIFICATION FOR SODIUM SILICOFLUORIDE USED  
FOR POTABLE WATER SUPPLY**

**SPECIFICATION SAJ CH/SS/001  
(Rev.4.0 / 09.2018)**

QUALITY ASSURANCE DEPARTMENT  
RANHILL SAJ SDN. BHD.

**Ranhill**

Ref. No. : CH/SS/001

Date : 26/9/2018

Total Pages : 6/6

Approve by: .....  
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## SAJ Specification for Sodium Silicofluoride Used For Potable Water Supply

CONTENT	PAGE
Contents	2
1.0 General Description	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 Transportation and Labeling	5
7.0 Certificate of Analysis	5
8.0 Pre-delivery Inspection and Evaluation	5
9.0 Certification	6



## SAJ Specification for Sodium Silicofluoride Used For Potable Water Supply

### 1.0 GENERAL DESCRIPTION

- 1.1) Features required for this specification are as follows or otherwise the Malaysian Standard, MS 1724: 2004 Specification for Sodium Silicofluoride for Use in Potable Water Supply.

### 2.0 FEATURES REQUIRED

- 2.1) Sodium Silicofluoride Used for Potable Water Supply shall comply with requirements as specified in Table 1 – Product Specification.

**Table 1 – Product Specification**

Parameter	Requirements	Test Method
<b>A. Chemical requirements</b>		
Sodium Silicofluoride (dry basic), % (w/w)	98.0 min	Annex A
Moisture, % (w/w)	0.5 max	ISO 5444
<b>B. Impurities</b>		
Insoluble matter, % (w/w)	0.5 max	Annex B
<b>C. Physical Requirements</b>		
Particle size, <u>passing Sieve 250 <math>\mu</math>m, % (w/w)</u>	90%min	n.a
<b>D. Toxic Substances</b>		
	<b>Maximum limit mg/kg of Product</b>	<b>Test Method</b>
Arsenic, As	400	Annex D
Cadmium, Cd	40	Annex C
Chromium, Cr	400	Annex C
Mercury, Hg	10	MS ISO 5993
Nickel, Ni	400	Annex C
Lead, Pb	400	Annex C
Selenium, Se	80	Annex D
Antimony, Sb	80	Annex D

2.2) Physical Properties of Sodium Silicofluoride used for potable water supply as follow:

No.	Physical Properties	Description
1.	Appearance	i. Shall be a white to yellowish ii. Odourless iii. Fine crystalline powder
2.	Bulk Density	i. 2.8 g/cm <sup>3</sup> (crystal form ) ii. 1.5g/cm <sup>3</sup> ( powder )
3.	Solubility	i. <u>4.3 g/L (at 0°C )</u> ii. <u>7 g/L (at 20°C )</u>
4.	Melting Point	i. > 500°C

2.3) Fluoride content shall be a minimum of 98% ( dry basic ), which corresponds to approximately 59.4% fluoride ions.

2.4) The Sodium Silicofluoride shall not contain any impurities and additives.

### 3.0 TEST AND INSPECTION

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

### 4.0 PACKING AND STORAGE

4.1 Sodium Silicofluoride shall be delivered in bag form.

4.2 For storage purpose, Dilution Tank shall be of acid-resistant and place in cool-dry, well-ventilated place, separated from acid, food and feedstuffs.

4.3 Avoid contact with strong mineral acids and alkalis.

4.4 Under proper storage conditions, Sodium Silicofluoride should be stable up to 12 months.

4.5 Bags of Sodium Silicofluoride should be stored on pallets in stacks not more than six bags high.

### 5.0 MANDATORY MARKING

Each bag of Sodium Silicofluoride shall have mark legibly on it including: - 5.1 “sodium silicofluoride”, trade name and grade;

5.2 Net Weight;

5.3 Name, address and telephone number of supplier and/or manufacturer;

5.4 Batch number

5.5 Date of manufacturing or packaging; and shall bear such other markings as requires by applicable laws;

## 6.0 TRANSPORTATION AND LABELING

The product shall be categorised under the following transportation guideline and labeling:

- 6.1 RID : class 6.1;
- 6.2 ADR : class 6.1;
- 6.3 IMO-IMDG : class 6.1, UN No 2674
- 6.4 IATA : class 6.1, UN No 2674

## 7.0 CERTIFICATE OF ANALYSIS

7.1 The contents of the certificate of analysis shall include the following:

- a) Sodium silicofluoride, % (w/w);
- b) Moisture, % (w/w); and
- c) Insoluble matter, % (w/w)

7.2 A comprehensive certificate of analysis shall include:

- a) Passing sieve of 250 $\mu$ m, % (w/w); and
- b) Toxic substances (Cr, Cd, Hg, Pb, As, Ni, Se, Sb), mg/kg of product

## 8.0 PRE-DELIVERY INSPECTION AND EVALUATION

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

## 9.0 CERTIFICATION

- 9.1 Manufacturer and/or supplier of the product are required to provide a copy of the certificate and testing report from SIRIM, IKRAM and/or other recognised certification bodies.
- 9.2 Tests report required should be those tests conducted within a year period.
- 9.3 SAJ has the right to refuse offer or reject supply if those documents required are not enclosed.

