



## Safety Data Sheet

### Salt Cake

#### 1. Identification

TRADE NAME (AS LABELED): Salt Cake.

SYNONYMS: Sodium bisulfate, Sodium Sulfate, Spent Acid.

PRODUCT USES: By-product of the manufacture of Chlorine Dioxide (ClO<sub>2</sub>)

CHEMICAL NAME/CLASS: Chemical Mixture.


MANUFACTURER'S NAME: WestRock

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#### 2. Hazard(s) Identification

Name	CAS#	Signal Word/Pictogram	Hazard Statement	GHS Classification/Category
Salt Cake <sup>1</sup>	13775-50-3	<b>DANGER</b> 	Causes Severe Skin Burns and Eye Damage  Causes Serious Eye Damage	HEALTH  Skin Corrosion/Irritation-Category 1  Eye Damage/Irritation-Category 1

<sup>1</sup> Salt Cake is a mixture sodium sulfate/bisulfate and sesquisulfate.

#### Precautionary Statements:

**PREVENTION STATEMENTS:** Wear protective gloves/clothing/ eye, face and respiratory protection. Prevent exposure to dusts or mists which cause respiratory tract irritation and burns. Do not ingest, harmful if swallowed. If swallowed, call the local poison control center or physician immediately.

**RESPONSE STATEMENTS:** If in eyes, rinse immediately with water for at least 15 minutes.

Remove contact lenses if present and easy to do. Continue rinsing. If on skin rinse thoroughly. Get medical attention immediately. Wash contaminated clothing before reuse.

**Ingredients of Unknown Acute Toxicity (>1%):** Not applicable.

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### 3. Composition/ Information on Ingredients

Component	CAS#	EC#	Wt %
Sodium Sulfate (Na <sub>2</sub> SO <sub>4</sub> )	7757-82-6	231-820-9	12-25
Sodium Hydrogen Sulfate (NaHSO <sub>4</sub> )	7681-38-1	231-665-7	20-40

### 4. First-Aid Measures

**Ingestion:** Ingestion may cause irritation. Do not induce vomiting. Give 1-2 glasses of water if person is conscious. Never give anything by mouth to person who becomes unconscious.

**Eye Contact:** Immediately flush eyes with large amounts of temperate water for 15 minutes. May cause damage to the eyes. Contact medical support immediately if product contacts the eyes.

**Skin Contact:** May cause skin redness, swelling and burning. Prolonged or repeated contact may cause dermatitis. Remove contaminated clothing immediately and wash affected area with water.

**Skin Absorption:** Product is not known to be absorbed through the skin.

**Inhalation:** Inhalation may cause respiratory tract irritation. Symptoms may include coughing, burning, difficulty breathing and shortness of breath. Remove exposed person to fresh air and contact medical support.

**Symptoms or Effects:**

Acute Symptoms/Effects – Liquid irritates the skin and may be cause serious damage to the eyes. May cause discomfort if swallowed. May cause respiratory system irritation.

Delayed Symptoms/Effects – Unique delayed effects are not anticipated after exposure. See Section 11 for additional information on chronic effects.

### 5. Fire-Fighting Measures

**Extinguishing Media and Restrictions:** Use any extinguishing media which is appropriate for the surrounding area.

**Autoignition Temperature:** Not available.

**Special Firefighting Procedures:** As in any fire wear NIOSH-approved self contained breathing apparatus and appropriate protective clothing for the situation.

**Hazardous Combustion Products:** If heated sulfur and sodium oxides may be evolved.

**Unusual Fire and Explosion Hazards:** None reported.

**NFPA Rating (Scale 0-4):**      **Health = 3**      **Fire = 0**      **Reactivity = 0**

### 6. Accidental Release Measures

**Steps to be Taken In Case Material Is Released or Spilled:** Avoid all contact with skin and eyes.

Clean up all spills immediately. Do not let product enter drains. Avoid dust formation. Use appropriate level of personal protection in accordance with regulatory requirements such as the OSHA respiratory protection standard 29 CFR 1910.134 and other PPE requirements when cleaning up spills. Use appropriate level of personal protection in accordance with regulatory requirements such as described below (section 8).

## 7. Handling and Storage

**Precautions to be Taken In Handling and Storage:** Avoid all contact with skin and eyes. Avoid contact with strong bases and oxidizing agents. Avoid formation of dust and/or aerosols. Use appropriate level of personal protection in accordance with regulatory requirements such as the OSHA respiratory protection standard 29 CFR 1910.134 and other PPE requirements when potential contact with the material exists.

## 8. Exposure Control Measures/Personal Protection

### Exposure Limits/Guidelines:

Name	CAS#	Agency	Exposure Limits	Comments
Salt Cake <sup>1</sup>	13775-50-3	OSHA ACGIH	None	None

<sup>1</sup> There are no specific exposure limits for salt cake or the constituent chemicals, sodium sulfate/bisulfate and sesquisulfate individually.

### Personal Protective Equipment:

**RESPIRATORY PROTECTION** – Where risk assessments show that respirators may be needed, the use of a NIOSH-approved filtering face piece respirator (“dust mask”) and goggles with appropriate cartridges is recommended when handling product. Use respiratory protection in accordance with regulatory requirements such as the OSHA respiratory protection standard 29CFR 1910.134 following a determination of potential exposure risk.

**PROTECTIVE GLOVES** – Use impervious nitrile rubber gloves when handling product.

**EYE PROTECTION** – Wear chemical goggles and face shield if exposure hazard exists.

**OTHER PROTECTIVE CLOTHING OR EQUIPMENT** – Work clothing sufficient to prevent all skin contact should be worn as well as rubber boots, if conditions warrant their use.

**WORK/HYGIENE PRACTICES** – Follow good hygienic and housekeeping practices.

### Ventilation:

**LOCAL EXHAUST** – Local exhaust ventilation is recommended when generating excessive levels of dusts from handling and is the preferred option because it prevents contaminant dispersion into work areas by controlling and collecting it at its source.

**MECHANICAL (GENERAL)** – Not applicable.

**SPECIAL** – Not applicable.

## 9. Physical/Chemical Properties

**Physical Description/Odor:** A clear to slightly yellow liquid with the odor of sulfuric acid.

**Auto-ignition temperature:** Not applicable

**Boiling Point (@ 760 mm Hg):** Not available

**Decomposition temperature:** Not available

**Evaporation Rate (Butyl Acetate = 1):** Not available

**Freezing Point:** Not available

**Flash Point:** Not available

**Flammability:** Not applicable

**Melting Point:** Not available

**Partition Coefficient (n-octonal/water):** Not available

**Odor Threshold:** Not available

**pH:** 1.1

**Solubility in Water (% by weight):** 75g/100g water @20° C

**Specific Gravity (H<sub>2</sub>O = 1):** 2.7

**Upper/Lower Explosive Limits:** Not available

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Vapor Density (air = 1; 1 atm):	Not available
Relative Density:	Not available
Vapor Pressure (mm Hg):	Not available
Viscosity:	Not available
% Volatile by Volume [@ 70°F (21°C)]:	Not available

## 10. Stability and Reactivity

**Stability:**  Unstable  Stable

**Conditions to Avoid:** Corrosive to steel.

**Incompatibility (Materials to Avoid):** Hypochlorites, strong bases, aluminum.

**Hazardous Decomposition or By-Products:** Decomposition may produce hydrogen sulfide gas and other total reduced sulfur gases.

**Hazardous Polymerization:**  May occur  Will not occur

**Sensitivity to Mechanical Impact:** Not applicable

**Sensitivity to Static Discharge:** Not applicable

## 11. Toxicological Information

**Acute toxicity:** No information available for product as a mixture. Individual component information is listed below.

**Components:**

Sodium sulfate: LD<sub>50</sub> (oral rat) = 5989 mg/kg.

Sodium hydrogen sulfate: LD<sub>50</sub> (oral mouse) = 2828 mg/kg.

**Target Organs/likely route of exposure:** Eyes, skin and respiratory system.

**Carcinogenicity:**

IARC: Listed by IARC - No

NTP: Listed by NTP - No

OSHA: Listed by OSHA – No

**Reproductive effects:** No information available.

**Aspiration Hazard:** No information available.

**Teratogenic effects:** No information available.

**Mutagenic effects:** No information available.

**Other:** No information available.

**Effects:**

Acute Effects – Liquid irritates the skin and may be cause serious damage to the eyes. May cause discomfort if swallowed. May cause respiratory system irritation.

Chronic Effects – May cause irritation to the skin following prolonged contact.

## 12. Ecological Information

**Environmental Fate:** No information available.

**Environmental Toxicity:**

Sodium sulfate: Daphnia Magna: 96 HR LC<sub>50</sub> 4547 mg/L. Bluegill: 96 HR LC<sub>50</sub> 12500-13500 mg/L.

Mosquito Fish: 96 HR LC<sub>50</sub> 17500 mg/L.

Sodium hydrogen sulfate: No information available.

### 13. Disposal Considerations

**Waste Disposal Method:** Waste material should be tested to determine if it meets applicable definitions of hazardous corrosive waste. Dispose of waste material according to local, state, federal, and provincial environmental regulations.

### 14. Transport Information

Mode: (Air, Land, water) Samples of Sodium sesquisulfate should be submitted to an authorized laboratory to determine if they meet the DOT and TDG definition of a corrosive material. If testing indicates that the sample is defined as being corrosive then the following label will apply:

Proper Shipping Name: Corrosive liquids, n.o.s.  
Hazard Class: 8  
UN/NA ID Number: UN1760  
Packing Group: II, III\*  
Label/Placard Required: CORROSIVE

\*The selection of packing group II or III depends on corrosivity test results. See 49 CFR 173.137.

Note: If the liquid does not meet these criteria then the product would not be covered by transport regulations.

### 15. Regulatory Information

**TSCA:** All ingredients are on the TSCA Inventory.

**CERCLA:** Not applicable.

**DSL:** All ingredients are on the Canadian Domestic Substance List inventory.

**OSHA:** This product would be a regulated hazard under the OSHA Hazard Communication Standard (29 CFR 1910.1200) as a hazardous chemical.

**STATE RIGHT-TO-KNOW:**

California – This product does not contain substances identified on the Proposition 65 list.

New Jersey – Sodium hydrogen sulfate is on the New Jersey RTK Hazardous Substance List.

**SARA 313 Information:** This product does not contain any chemical ingredients that exceed the threshold reporting levels established by SARA Title III, section 313 and 40 CFR section 372.

**SARA 311/312 Hazard Category:** This product has been reviewed according the EPA "Hazard Categories" promulgated under SARA Title III, Sections 311 and 312 and is considered, under applicable definitions, to meet the following categories:

An immediate (acute) health hazard	Yes
A delayed (chronic) health hazard	No
A fire hazard	No
A reactivity hazard	No
A sudden release hazard	No

### 16. Other Information

**Date Prepared:** 5/26/2015

**Date Revised:** 07/01/2015

**Prepared By:** WestRock Safety and Health Department.

**WestRock SDS available on:** [www.westrock.com](http://www.westrock.com)

**Disclaimer:** The information and data herein are believed to be accurate and have been compiled by WestRock Safety and Occupational Health professionals from external sources believed to be reliable. WestRock provides the information contained herein in good faith but makes no representation as to its comprehensiveness

## 16. Other Information (cont'd.)

or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose and use in compliance with all applicable laws and standards. WestRock will not be liable for claims relating to any party's use of or reliance on information and data contained herein.

### Definition of Common Terms:

ACGIH	= American Conference of Governmental Industrial Hygienists
C	= Ceiling Limit
CAS#	= Chemical Abstracts System Number
CERCLA	= Comprehensive Environmental Response, Compensation, and Liability Act
DOT	= U. S. Department of Transportation
DSL	= Canada-Domestic Substance List
EC50	= Effective concentration that inhibits the endpoint to 50% of control population
EC#	= European Commission Number
ENCS	= Japanese Existing and New Chemical Substances List
EPA	= U.S. Environmental Protection Agency
IARC	= International Agency for Research on Cancer
IATA	= International Air Transport Association
IMDG	= International Maritime Dangerous Goods
LC50	= Concentration in air resulting in death to 50% of experimental animals
LCLo	= Lowest concentration in air resulting in death
LD50	= Administered dose resulting in death to 50% of experimental animals
LDLo	= Lowest dose resulting in death
LEL	= Lower Explosive Limit
LFL	= Lower Flammable Limit
MSHA	= Mine Safety and Health Administration
NA	= Not Applicable
NIOSH	= National Institute for Occupational Safety and Health
NFPA	= National Fire Protection Association
NPRI	= Canadian National Pollution Release Inventory
NTP	= National Toxicology Program
OSHA	= Occupational Safety and Health Administration
PEL	= Permissible Exposure Limit
PNOR	= Particulate Not Otherwise Regulated
PNOS	= Particulate Not Otherwise Stated
RCRA	= Resource Conservation and Recovery Act
REACH	= Registration, Evaluation, Authorisation and Restriction of Chemicals
STEL	= Short-Term Exposure Limit (15 minutes)
STP	= Standard Temperature and Pressure
TCLo	= Lowest concentration in air resulting in a toxic effect
TDG	= Canadian Transportation of Dangerous Goods
TDLo	= Lowest dose resulting in a toxic effect
TLV	= Threshold Limit Value
TSCA	= Toxic Substance Control Act
TWA	= Time-Weighted Average (8 hours)
UFL	= Upper Flammable Limit
WHMIS	= Canada-Workplace Hazardous Materials Information System

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