

	<b>MSDS</b> <b>Material Safety Data</b> <b>Sheet</b>	Sodium Chloride Solution for Inhalation with pH of 7.4, for concentration 7%, NDC 50190-740-60
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# PART 1: Sodium Chloride

## Section 1 - Chemical Product and Company Identification

### **MSDS Name: Sodium Chloride**

Synonyms: Common salt; Halite; Rock salt; Saline; Salt; Sea salt; Table salt.

Manufacturer: Asept Pak, Inc., 64 West Street, Malone, NY 12953, Ph 518-651-2026, Fax:518-651-2046

Distributed by: PharmaCaribe LLC., 3513 DiLeuca St, Punta Gorda, FL 33950,

Ph: 866-473-8547, Fax:866-532-0076

## Section 2 - Composition, Information on Ingredients

CAS# 7647-14-5

Chemical Name: Sodium chloride

Percent: ca.100

EINECS/ELINCS: 231-598-3

Hazard Symbols: None listed.

Risk Phrases: None listed.

## Section 3 - Hazards Identification

### EMERGENCY OVERVIEW

Caution! Sodium Chloride may cause eye and skin irritation. May cause respiratory tract irritation.

Target Organs: No data found.

### Potential Health Effects

Eye: Sodium Chloride may cause eye irritation.

Skin: It may cause skin irritation.

Ingestion: Sodium Chloride ingestion of large amounts may cause gastrointestinal irritation. Ingestion of large amounts may cause nausea and vomiting, rigidity or convulsions. Continued exposure can produce coma, dehydration, and internal organ congestion.

Inhalation: It may cause respiratory tract irritation.

Chronic: No information found.

## Section 4 - First Aid Measures

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin: Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists. Wash clothing before reuse.

Ingestion: If victim is conscious and alert, give 2-4 cupfuls of milk or water. Get medical aid. Wash mouth out with water.

Inhalation: Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.

Notes to Physician: None

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### **Section 5 - Fire Fighting Measures**

General Information: Water runoff can cause environmental damage. Dike and collect water used to fight fire. Wear appropriate protective clothing to prevent contact with skin and eyes. Wear a self-contained breathing apparatus (SCBA) to prevent contact with thermal decomposition products. Substance is noncombustible.

Extinguishing Media: For small fires, use water spray, dry chemical, carbon dioxide or chemical foam.

### **Section 6 - Accidental Release Measures**

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation.

### **Section 7 - Handling and Storage**

Handling: Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Do not ingest or inhale.

Storage: Store in a cool, dry, well-ventilated area away from incompatible substances. Store protected from moisture.

### **Section 8 - Exposure Controls, Personal Protection**

Engineering Controls: Good general ventilation should be sufficient to control airborne levels. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Exposure Limits:

Chemical Name: Sodium chloride

ACGIH: none listed

NIOSH: none listed

OSHA - Final PELs: none listed

OSHA Vacated PELs: No

OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Wear safety glasses with side shields.

Skin: Wear appropriate gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to minimize contact with skin.

Respirators: A NIOSH/MSHA approved air purifying dust or mist respirator or European Standard EN 149.



# MSDS Material Safety Data Sheet

Sodium Chloride Solution for  
Inhalation with pH of 7.4, for  
concentration  
7%, NDC 50190-740-60

## **Section 9 - Physical and Chemical Properties**

Physical State: Solid  
Appearance: colorless or white  
Odor: odorless  
pH: Not available.  
Vapor Pressure: Not available.  
Vapor Density: Not available.  
Evaporation Rate: Not available.  
Viscosity: Not available.  
Boiling Point: 2575 deg F  
Freezing/Melting Point: 1474 deg F  
Autoignition Temperature: Not available.  
Flash Point: Not applicable.  
Decomposition Temperature: Not available.  
NFPA Rating: (estimated) Health: 1; Flammability: 0; Reactivity: 0  
Explosion Limits, Lower: Not available.  
Upper: Not available.  
Solubility: Soluble.  
Specific Gravity/Density: 2.165  
Molecular Formula: NaCl  
Molecular Weight: 58.43

## **Section 10 - Stability and Reactivity**

Chemical Stability: Stable.  
Conditions to Avoid: High temperatures, exposure to moist air or water.  
Incompatibilities with Other Materials: Reacts with most noble metals such as iron or steel, building materials (such as cement), bromine, or trifluoride. Potentially explosive reaction with dichloromaleic anhydride + urea. Electrolysis of mixtures with nitrogen compounds may form explosive nitrogen trichloride.  
Hazardous Decomposition Products: Toxic fumes of sodium oxide.  
Hazardous Polymerization: Has not been reported.

## **Section 11 - Toxicological Information**

RTECS#:  
CAS# 7647-14-5: VZ4725000  
LD50/LC50:  
CAS# 7647-14-5:  
Draize test, rabbit, eye: 100 mg Mild;  
Draize test, rabbit, eye: 100 mg/24H Moderate;  
Draize test, rabbit, eye: 10 mg Moderate;  
Draize test, rabbit, skin: 50 mg/24H Mild;  
Draize test, rabbit, skin: 500 mg/24H Mild;  
  
Inhalation, rat: LC50 = >42 gm/m<sup>3</sup>/1H;  
Oral, mouse: LD50 = 4 gm/kg;  
Oral, rat: LD50 = 3 gm/kg;  
Skin, rabbit: LD50 = >10 gm/kg; <BR.

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Carcinogenicity:  
CAS# 7647-14-5: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.  
Epidemiology: No information reported.  
Teratogenicity: An experimental teratogen.  
Reproductive Effects: Human reproductive effects by intraplacental route: terminates pregnancy.  
Experimental reproductive effects.  
Neurotoxicity: No information reported.  
Mutagenicity: See actual entry in RTECS for complete information.  
Other Studies: No information reported.

**Section 12 - Ecological Information**

Ecotoxicity: No data available. No information found.  
Environmental: No information reported.  
Physical: No information found  
Other: No information found

**Section 13 - Disposal Considerations**

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.  
RCRA P-Series: None listed.  
RCRA U-Series: None listed.

**Section 14 - Transport Information**

	US DOT	IATA	RID/ADR	IMO	Canada TDG
Shipping Name	No information available.				No information available.
Hazard Class:					
UN Number:					
Packing Group:					

**Section 15 - Regulatory Information**

**US FEDERAL:**

TSCA  
CAS# 7647-14-5 is listed on the TSCA inventory.  
Health & Safety Reporting List  
None of the chemicals are on the Health & Safety Reporting List.  
Chemical Test Rules  
None of the chemicals in this product are under a Chemical Test Rule.  
Section 12b  
None of the chemicals are listed under TSCA Section 12b.  
TSCA Significant New Use Rule  
None of the chemicals in this material have a SNUR under TSCA.  
SARA  
Section 302 (RQ)  
None of the chemicals in this material have an RQ.  
Section 302 (TPQ)

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None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 7647-14-5: acute.

Section 313

No chemicals are reportable under Section 313.

Clean Air Act:

This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone depleters. This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

**STATE:**

CAS# 7647-14-5 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

Not available.

Risk Phrases:

Safety Phrases:

S 24/25 Avoid contact with skin and eyes.

WGK (Water Danger/Protection)

CAS# 7647-14-5: 0

**Canada:**

CAS# 7647-14-5 is listed on Canada's DSL List. CAS# 7647-14-5 is listed on Canada's DSL List.

This product has a WHMIS classification of D2B.

CAS# 7647-14-5 is not listed on Canada's Ingredient Disclosure List.

Exposure Limits

## Part 2: Sodium Bicarbonate

NDC 50190-740-60, PulmoSal 7%, Sodium Chloride Solution for Inhalation, pH 7.4 contains 0.16 mg per/4ml of Sodium bicarbonate to buffer/adjust the solution's pH.

### **Section 1: Chemical Identification**

**Product Name: Sodium bicarbonate**

Synonym: Baking Soda; Bicarbonate of soda; Sodium acid carbonate; Monosodium carbonate; Sodium hydrogen carbonate; Carbonic acid monosodium salt

Chemical Name: Sodium Bicarbonate

Chemical Formula: NaHCO<sub>3</sub>

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## **Section 2: Composition and Information on Ingredients**

Composition:

Name CAS # 144-55-8% by Weight

Sodium bicarbonate 144-55-8 100

Toxicological Data on Ingredients: Not applicable.

## **Section 3: Hazards Identification**

Potential Acute Health Effects: Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation.

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available.

TERATOGENIC EFFECTS: Not available.

DEVELOPMENTAL TOXICITY: Not available. Repeated or prolonged exposure is not known to aggravate medical condition.

## **Section 4: First Aid Measures**

Eye Contact: Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention if irritation occurs.

Skin Contact: Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops. Cold water may be used.

Serious Skin Contact: Not available.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation: Not available.

Ingestion: Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious

person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

Serious Ingestion: Not available.

## **Section 5: Fire and Explosion Data**

Flammability of the Product: Non-flammable.

Auto-Ignition Temperature: Not applicable.

Flash Points: Not applicable.

Flammable Limits: Not applicable.

Products of Combustion: Not available.

Fire Hazards in Presence of Various Substances: Not applicable.

Explosion Hazards in Presence of Various Substances: Risks of explosion of the product in presence of mechanical impact: Not available.

Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions: Not applicable.

Special Remarks on Fire Hazards: When heated to decomposition it emits acrid smoke and irritating fumes.

Special Remarks on Explosion Hazards: Not available.

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### **Section 6: Accidental Release Measures**

Small Spill: Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on

the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill: Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

### **Section 7: Handling and Storage**

Precautions: Do not ingest. Do not breathe dust. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as acids.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area.

### **Section 8: Exposure Controls/Personal Protection**

Engineering Controls: Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection: Safety glasses. Lab coat, Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill: Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits: Not available.

### **Section 9: Physical and Chemical Properties**

Physical state and appearance: Solid.

Odor: Odorless.

Taste: Saline. Alkaline.

Molecular Weight: 84.01g/mole

Color: White.

pH (1% soln/water): Not available.

Boiling Point: Not available.

Melting Point: Not available.

Critical Temperature: Not available.

Specific Gravity: Density: 2.159 (Water = 1)

Vapor Pressure: Not applicable.

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water.

Solubility: Soluble in cold water. Slightly soluble in alcohol. Solubility in Water: 6.4, 7.6, 8.7, 10.0, 11.3, 12.7, 14.2, 16.5, 19.1 g/100

solution at 0, 10, 20, 30, 40, 50, 60, 80, and 100 deg. C, respectively. Solubility in Water: 6.9, 8.2, 9.6, 11.1, 12.7, 14.5, 16.5,

19.7, and 23.6 g/100g water at 0, 10, 20, 30, 40, 50, 60, 80, 100 deg. C, respectively.

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### **Section 10: Stability and Reactivity Data**

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Incompatible materials, Moisture. Stable in dry air, but slowly decomposes in moist air. Incompatibility with various substances: Reactive with acids.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity: Reacts with acids to form carbon dioxide. Dangerous reaction with monoammonium phosphate or a sodium-potassium alloy.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

### **Section 11: Toxicological Information**

Routes of Entry: Inhalation. Ingestion.

Toxicity to Animals: Acute oral toxicity (LD50): 3360 mg/kg [Mouse].

Chronic Effects on Humans: Not available.

Other Toxic Effects on Humans: Slightly hazardous in case of skin contact (irritant), of ingestion, of inhalation.

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Sodium Bicarbonate as produced genetic effects in rats (unscheduled DNA synthesis). However, no affects have been found in humans.

Special Remarks on other Toxic Effects on Humans:

Acute Potential Health Effects: Skin: May cause mild skin irritation.

Eyes: May cause mild eye irritation. Inhalation: May cause respiratory tract irritation. Symptoms may include coughing and sneezing. Ingestion: Symptoms of overexposure to Sodium Bicarbonate include thirst, abdominal pain, gastroenteritis, and inflammation of the digestive tract. Chronic Potential Health Effects: Skin: Repeated or prolonged skin contact may cause irritation, drying or cracking of the skin.

Ingestion and Inhalation: Chronic toxicity usually occurs within 4 to 10 days following ingestion of very large amounts. Repeated or prolonged ingestion or inhalation of large amounts may cause metabolic abnormalities, and sodium retention. Metabolic abnormalities such as acidosis, hypernatremia, hypochloremia, alkalosis, hypocalcemia, or sodium retention may affect the blood, kidneys, respiration (cyanosis, apnea secondary to metabolic acidosis or pulmonary edema), and cardiovascular system (tachycardia, hypotension). Severe toxicity may also affect behavior/central nervous system/nervous system. Neurological changes may result from metabolic abnormalities. These may include fatigue, irritability, dizziness, mental confusion, paresthesia, seizures, tetany, cerebral edema  
Medical Conditions Aggravated by Exposure: Persons with pre-existing skin conditions might have increased sensitivity. Predisposing conditions that contribute to a mild alkali syndrome include, renal disease, dehydration, and electrolyte imbalance, hypertension, sarcoidosis, congestive heart failure, edema, or other sodium retaining conditions.

### **Section 12: Ecological Information**

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation: Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise. Toxicity of the Products of Biodegradation: The product itself and its products of degradation are not toxic.

Special Remarks on the Products of Biodegradation: Not available.

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### **Section 13: Disposal Considerations**

Waste Disposal: Waste must be disposed of in accordance with federal, state and local environmental control regulations.

### **Section 14: Transport Information**

DOT Classification: Not a DOT controlled material (United States).

Identification: Not applicable.

Special Provisions for Transport: Not applicable.

### **Section 15: Other Regulatory Information**

Federal and State Regulations: TSCA 8(b) inventory: Sodium bicarbonate

Other Regulations: Not available.

Other Classifications:

WHMIS (Canada): Not controlled under WHMIS (Canada).

DSCL (EEC):

This product is not classified according to the EU regulations. Not applicable.

HMS (U.S.A.):

Health Hazard: 1

Fire Hazard: 0

Reactivity: 0

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 1

Flammability: 0

Reactivity: 0

Specific hazard:

Protective Equipment:

Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Safety glasses.