



MATERIAL SAFETY DATA SHEET

Product Name: Sodium Chloride Injection, Concentrate

1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Manufacturer Name And Address Hospira Inc.
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Lake Forest, Illinois USA
60045

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Hospira, Inc., Non-Emergency 224-212-2000

Product Name Sodium Chloride Injection, Concentrate

Synonyms Table salt

2. COMPOSITION/INFORMATION ON INGREDIENTS

Active Ingredient Name Sodium Chloride

Chemical Formula NaCl

Preparation Non-hazardous ingredients include Water for Injection. Hazardous ingredients present at less than 1% may include hydrochloric acid which is used to adjust the pH.

Component	Approximate Percent by Weight	CAS Number	RTECS Number
Sodium Chloride	1 ~ 24	7647-14-5	VZ4725000

3. HAZARD INFORMATION

Carcinogen List

Substance	IARC	NTP	OSHA
Sodium Chloride	Not Listed	Not Listed	Not Listed

Emergency Overview Sodium Chloride Injection Concentrate is a solution containing sodium chloride. In clinical use, sodium chloride is used in the management of deficiencies of sodium and chloride ions in salt-losing conditions. In the workplace, concentrated sodium chloride solutions may be irritating to the eyes and respiratory tract. Possible target organs may include the eyes, cardiovascular system, gastrointestinal system and nervous system.

Occupational Exposure Potential Information on the absorption of this product via inhalation or skin contact is not available. Avoid liquid aerosol generation and skin contact.

Signs and Symptoms No signs or symptoms from occupational exposure are known. In the workplace, this product should be considered potentially irritating to the eyes and respiratory tract. In clinical use, gastrointestinal effects associated with acute oral ingestion of excessive amounts of sodium chloride include nausea, vomiting, diarrhea, and abdominal cramps. Excessive use of chloride salts may cause a loss of bicarbonate with an acidifying effect. Retention of excess sodium and

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accumulation of excess water may also occur and may lead to pulmonary and peripheral edema. Hyponatremia has rarely occurred with the use of saline for induction of emesis or for gastric lavage. However, hyponatremia may occur after inappropriate intravenous use of hypertonic saline. The most serious effect of hyponatremia is dehydration of the brain which causes somnolence and confusion progressing to convulsions, coma, respiratory failure, and death. Other symptoms include thirst, reduced salivation and lachrymation, fever, sweating, tachycardia, hypertension or hypotension, headache, dizziness, restlessness, irritability, weakness, and muscular twitching and rigidity.

Medical Conditions Aggravated by Exposure Pre-existing cardiovascular or gastrointestinal ailments.

4. FIRST AID MEASURES

Eye contact	Remove from source of exposure. Flush with copious amounts of water. If irritation persists or signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.
Skin contact	Remove from source of exposure. Flush with copious amounts of water. If irritation persists or signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.
Inhalation	Remove from source of exposure. If signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.
Ingestion	Remove from source of exposure. If signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.

5. FIRE FIGHTING MEASURES

Flammability	None anticipated for this aqueous product.
Fire & Explosion Hazard	None anticipated for this aqueous product.
Extinguishing media	As with any fire, use extinguishing media appropriate for primary cause of fire.
Special Fire Fighting Procedures	No special provisions required beyond normal firefighting equipment such as flame and chemical resistant clothing and self contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Spill Cleanup and Disposal	Isolate area around spill. Put on suitable protective clothing and equipment as specified by site spill procedures. Absorb the liquid with suitable material and clean affected area with soap and water. Dispose of spill materials according to the applicable federal, state, or local regulations.
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7. HANDLING AND STORAGE

Handling	No special handling required under conditions of normal product use.
Storage	No special storage required for hazard control. For product protection, follow storage recommendations noted on the product case label, the primary

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container label, or the product insert.

Special Precautions No special precautions required for hazard control.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Component	Type	Exposure limits			Note
		mg/m ³	ppm	µg/m ³	
Sodium Chloride	Not Applicable	N/A	N/A	N/A	None Established

Respiratory protection Respiratory protection is normally not needed during intended product use. However, if the generation of aerosols is likely, and engineering controls are not considered adequate to control potential airborne exposures, the use of an approved air-purifying respirator with a HEPA cartridge (N95 or equivalent) is recommended under conditions where airborne aerosol concentrations are not expected to be excessive. For uncontrolled release events, or if exposure levels are not known, provide respirators that offer a high protection factor such as a powered air purifying respirator or supplied air. A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions require respirator use. Personnel who wear respirators should be fit tested and approved for respirator use as required.

Skin protection If skin contact with the product formulation is likely, the use of latex or nitrile gloves is recommended.

Eye protection Eye protection is normally not required during intended product use. However, if eye contact is likely to occur, the use of chemical safety goggles (as a minimum) is recommended.

Engineering Controls Engineering controls are normally not needed during the normal use of this product.

9. PHYSICAL/CHEMICAL PROPERTIES

Appearance/Physical State	Liquid
Color	Clear
Odor	NA
Odor Threshold:	NA
pH:	5.0 (4.5 to 7.0)
Melting point/Freezing point:	NA
Initial Boiling Point/Boiling Point Range:	NA
Evaporation Rate:	NA
Flammability (solid, gas):	NA
Upper/Lower Flammability or Explosive Limits:	NA
Vapor Pressure:	NA
Vapor Density:	NA
Specific Gravity:	NA
Solubility:	Freely soluble in water; practically insoluble in dehydrated alcohol
Partition coefficient: n-octanol/water:	NA
Auto-ignition temperature:	NA
Decomposition temperature:	NA

10. STABILITY AND REACTIVITY

Reactivity	Not determined. None anticipated from this product.
Chemical Stability	Stable under standard use and storage conditions.
Hazardous Reactions	Not determined
Conditions to avoid	Not determined
Incompatibilities	Not determined
Hazardous decomposition products	Not determined. During thermal decomposition, it may be possible to generate irritating vapors and/or toxic fumes of hydrogen chloride and sodium oxide.
Hazardous Polymerization	Not anticipated to occur with this product.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Not determined for the product formulation. Information for the ingredients is as follows:

Ingredient(s)	Percent	Test Type	Route of Administration	Value	Units	Species
Sodium Chloride	100	LD50	Oral	3000	mg/kg	Rat
Sodium Chloride	100	LD50	Oral	4000	mg/kg	Mouse
Sodium Chloride	100	LD50	Dermal	> 10,000	mg/kg	Rabbit
Sodium Chloride	100	LC50(1hr)	Inhalation	> 42,000	mg/m3	Rat
Sodium Chloride	100	LD50	Intraperitoneal	2600 2602	mg/kg mg/kg	Rat Mouse
Sodium Chloride	100	LD50	Intravenous	645	mg/kg	Mouse

Aspiration Hazard	None anticipated from normal handling of this product.
Dermal Irritation/Corrosion	None anticipated from normal handling of this product. In animal studies, sodium chloride was reported to be a mild skin irritant. However, inadvertent contact of this product with skin is not anticipated to produce irritation.
Ocular Irritation/Corrosion	None anticipated from normal handling of this product. In animal studies, sodium chloride was reported to be a mild to moderate irritant. Inadvertent contact of this product with eyes may produce irritation with redness and discomfort.
Dermal or Respiratory Sensitization	None anticipated from normal handling of this product.
Reproductive Effects	Physiological sodium chloride solutions are often used as negative controls in teratology experiments and do not appear to produce adverse effects on embryological development. Administration of sodium chloride has been reported not to be teratogenic in rats, hamsters, and pigs. Subcutaneous injection of 1900 or 2500 mg sodium chloride in pregnant mice increased the incidence of minor skeletal anomalies in the offspring. Increased neonatal body weight was reported in offspring of rats fed high (8%) salt diets when compared to the offspring of dams fed low salt diets.

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Mutagenicity	Sodium chloride was negative in the Ames test, with and without metabolic activation. Sodium chloride was positive for genotoxicity in an in vitro mouse lymphoma assay.
Carcinogenicity	The carcinogenic potential of sodium chloride has not been fully evaluated.
Target Organ Effects	Possible target organs may include the eyes, cardiovascular system, gastrointestinal system and nervous system.

12. ECOLOGICAL INFORMATION

Aquatic Toxicity	Not determined for product. Information for sodium chloride is as follows: LC50(96hr, flow through) = 9675-11,100 mg/L in freshwater fish LC50(96hr, static) = 7341-17,550 mg/L in freshwater fish LC50(24hr, static) = 13,750 - 14,125 mg/L in freshwater fish LC50(48 hr) = 3310 mg/L in Daphnia magna.
Persistence/Biodegradability	Not determined for product.
Bioaccumulation	Not determined for product.
Mobility in Soil	Not determined for product.

13. DISPOSAL CONSIDERATIONS

Waste Disposal	All waste materials must be properly characterized. Further, disposal should be performed in accordance with the federal, state or local regulatory requirements.
Container Handling and Disposal	Dispose of container and unused contents in accordance with federal, state and local regulations.

14. TRANSPORTATION INFORMATION

ADR/ADG/ DOT STATUS:	Not regulated
IMDG STATUS:	Not regulated
ICAO/IATA STATUS:	Not regulated
Transport Comments:	None

15. REGULATORY INFORMATION

USA Regulations

Substance	TSCA Status	CERCLA Status	SARA 302 Status	SARA 313 Status	PROP 65 Status
Sodium Chloride	Listed	Not Listed	Not Listed	Not Listed	Not Listed

RCRA Status Not Listed

U.S. OSHA Classification Eye Irritant
Target Organ Toxin

GHS Classification *In the EU, classification under GHS/CLP does not apply to certain substances and mixtures, such as medicinal products as defined in Directive 2001/83/EC, which are in the finished state, intended for the final user:

Hazard Class Not Applicable

Hazard Category Not Applicable

Signal Word Not Applicable

Symbol Not Applicable

Prevention P260 - Do not breathe dust/fume/gas/mist/vapors/spray.

Hazard Statement Not Applicable

Response: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical attention. Wash hands after handling.

Get medical attention if you feel unwell.

EU Classification*

*Medicinal products are exempt from the requirements of the EU Dangerous Preparations Directive. Information provided below is for the pure drug substance Sodium Chloride

Classification(s): Not Applicable

Symbol: Not Applicable

Indication of Danger: Not Applicable

Risk Phrases: Not Applicable

Safety Phrases: S23 - Do not breathe vapor.
S24 - Avoid contact with skin.
S25 - Avoid contact with eyes.
S37/39 - Wear suitable gloves and eye/face protection.

16. OTHER INFORMATION:

Notes:

ACGIH TLV	American Conference of Governmental Industrial Hygienists – Threshold Limit Value
CAS	Chemical Abstracts Service Number
CERCLA	US EPA law, Comprehensive Environmental Response, Compensation, and Liability Act
DOT	US Department of Transportation Regulations
EEL	Employee Exposure Limit
IATA	International Air Transport Association
LD50	Dosage producing 50% mortality
NA	Not applicable/Not available
NE	Not established
NIOSH	National Institute for Occupational Safety and Health
OSHA PEL	US Occupational Safety and Health Administration – Permissible Exposure Limit
Prop 65	California Proposition 65
RCRA	US EPA, Resource Conservation and Recovery Act
RTECS	Registry of Toxic Effects of Chemical Substances
SARA	Superfund Amendments and Reauthorization Act
STEL	15-minute Short Term Exposure Limit
TSCA	Toxic Substance Control Act
TWA	8-hour Time Weighted Average

MSDS Coordinator: Hospira GEHS

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