



Safety Data Sheet  
**Sodium Chloride Solution, 20-25%**

**1. IDENTIFICATION**

Product identifier	<b>Sodium Chloride Solution, 20-25%</b>
Product code	520-USA-TMI
Other means of identification:	Salt, Saltwater, Brine, Halite, Saline
Recommended use	Textile dyeing operations; production of sodium chlorate
Recommended restrictions	None known.

**Manufacturer/Importer/Supplier/Distributor information:**

Supplier name	Trinity Manufacturing, Inc.		
Address	11 EV Hogan Drive, PO Box 1519 Hamlet, NC, 28345, USA		
Telephone	800-632-6228 or 910-419-6551 (Customer Service)		
E-mail	sds@trinitymfg.com		
Emergency phone number	<b>FOR CHEMICAL EMERGENCY (Spill, Leak, Fire, Exposure, or Accident) Call CHEMTREC Day or Night</b>		
	Within USA and Canada:	1-800-424-9300 (24/7)	
	Outside USA and Canada:	+1-703-527-3887 (collect calls accepted)	

**2. HAZARDS IDENTIFICATION**

<b>GHS Classification</b>	Based on available data, this material is not considered a hazardous chemical or mixture per classification under 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)
<b>GHS Signal Word</b>	None
<b>GHS Hazard Statements</b>	
Physical hazards	Not classified as a hazardous chemical or mixture
Health hazards	Not classified as a hazardous chemical or mixture
Environmental hazards	Not classified as an environmentally hazardous substance
<b>GHS Precautionary Statements</b>	
	There are no Precautionary Statements assigned.
<b>Label Elements</b>	None required
Signal word	None
Unknown acute toxicity	0% of the mixture consists of ingredients of unknown toxicity.
<b>Hazard(s) Not Otherwise classified (HNOC)</b>	None
<b>Supplemental Information</b>	Chloride ions increase the conductivity of water and accelerate corrosion on metal objects such as pumps and infrastructure. Brine solutions are slowly, but persistently corrosive to metals.  Dispose of contents/container in accordance with local, state, and federal regulations.

### **3. COMPOSITION/INFORMATION ON INGREDIENTS**

<b>Chemical Name</b>	<b>Common Name and Synonyms</b>	<b>CAS Number</b>	<b>% by Weight</b>
Sodium Chloride	Salt, Saltwater, Brine, Halite, Saline	7647-14-5	20 - 25
Water		7732-18-5	75 - 80

### **4. FIRST AID MEASURES**

Inhalation	No effects expected. If inhalation occurs and you feel unwell, move to fresh air.
Skin contact	Irrigate with water. If irritation occurs, protect skin from further contact.
Eye contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If irritation develops and persists, get medical attention.
Ingestion	No effect expected. Rinse mouth. Provide fluids if thirsty. If large amounts are ingested, get medical advice/attention.
Most important symptoms/effects, acute and delayed	Direct contact with eyes may cause temporary irritation and redness to conjunctiva. Direct contact with skin may cause redness or dry skin. Inhaling mists or vapors of this material may cause mild respiratory irritation. Ingesting may cause increased thirst. Ingesting large amounts can cause electrolyte imbalance. No delayed/chronic effects have been identified.
Indication of immediate medical attention and special treatment needed	Treat symptomatically. Treatment for overexposure should be directed at controlling the symptoms and clinical condition of the patient. Unless symptoms reappear, no further treatment is required.
Notes to Physician	This is a concentrated salt solution of sodium chloride. This material is recognized as non-toxic. Health effects are typically reversible within the day of exposure. Correct any fluid/electrolyte imbalance for large ingestions.

### **5. FIRE-FIGHTING MEASURES**

Suitable extinguishing media	Does not burn. Use extinguishing agents suitable for surrounding fire.
Unsuitable extinguishing media	No information available.
Specific hazards arising from the substance or mixture	Hazardous combustion products: Hydrogen chloride gas, Sodium oxides.
Special protective equipment and precautions for firefighters	Wear NIOSH-approved self-contained breathing apparatus pressure-demand, and full protective gear.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	Product is not combustible.

### **6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures	Handle in accordance with good industrial hygiene and safety practice. As a precaution, avoid contact with skin and eyes. Use personal protective equipment. See section 8 of the SDS for personal protection.
Methods and materials for Containment and cleaning Up	Stop leak if possible without personal risk. Mop up or absorb in any available absorbent. Liquid material may be removed with a properly rated vacuum truck. Collect spilled material in appropriate container for disposal. Small amounts of residual can be flushed to sewer with plenty of water.
Environmental precautions	Avoid liquid entering sanitary sewer or storm drains or other waterways. Small amounts of residue may be flushed to sewer with plenty of water. Section 12 has additional information.

## **7. HANDLING AND STORAGE**

Precautions for safe handling	Handle in accordance with good industrial hygiene practice. Avoid contact with skin and eyes. Wash after handling. Wear personal protective equipment as described in Section 8.
Conditions for safe storage	Store at ambient temperature and pressure. Keep in properly labeled and closed containers. Keep separate from fresh water supply or outlets. Maintain good housekeeping.
Incompatibilities or Materials to Avoid	None known.

## **8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

Occupational exposure limits	No occupational exposure limits have been established for this material or its components.
Non-Regulatory exposure limits	This product does not contain any components that have advisory occupational exposure limits.
Biological limit values	No biological exposure limits have been established for sodium chloride.
Appropriate engineering controls	No airborne limits have been established for this product. Ensure that suitable eyewash flushing facilities are proximal to the workstation location.

### Individual protection measures:

Eye/face protection	Wear safety glasses with side shields (or goggles).
Skin and body protection	Standard industrial work clothes or coveralls, and safety footwear are minimum protection.
Hand protection	Wear chemical resistant gloves when handling product.
Protective material types	Butyl rubber, Natural rubber, Neoprene, Nitrile, Vinyl.
Respiratory protection	Under normal conditions, no respiratory protection is necessary. A NIOSH-approved respirator with N95 cartridges may be worn to minimize exposure to nuisance mists or vapors.
General hygiene considerations	When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing with soap after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## **9. PHYSICAL AND CHEMICAL PROPERTIES**

Physical state	Liquid
Appearance	Clear to opaque (cloudy white)
Color	Clear, colorless
Odor	Salty
Odor threshold	No data available
pH	6.6 – 8.5 typical; pH 10 for electrolyzer-only feed
Melting point/freezing point	-21 °C to 15.5 °C (-6 °F to 60 °F)
Initial boiling point/boiling range	> 100 °C (212 °F)
Flash point	Not flammable
Evaporation rate	No data available
Flammability (solid, gas)	Not applicable
Lower Flammability limit	Not flammable
Upper Flammability limit	Not flammable

Vapor pressure	No data available		
Vapor density (air = 1)	No data available		
Relative density (water = 1)	20% concentration	1.152 specific gravity @ 15.5 °C (60 °F)	
	25% concentration	1.193 specific gravity @ 15.5 °C (60 °F)	
Solubility(ies):			
Solubility in water	31.6 g/100 mL @ 0 °C (32 °F)		
Partition coefficient (n-octanol/water)	Not applicable		
Auto-ignition temperature	Not applicable		
Decomposition temperature	Not data available		
Viscosity	No data available		
<u>Other information:</u>			
Weight per U.S. gallon	20% concentration	9.594 lbs @ 15.5 °C (60 °F)	1.925 lbs salt/gallon water
	25% concentration	9.935 lbs @ 15.5 °C (60 °F)	2.491 lbs salt/gallon water
Flammability class (NFPA)	Not flammable		
Molecular formula	Na <sup>+</sup> Cl + H <sub>2</sub> O		
Molecular weight	58.44 g/mol (sodium chloride)		
Percent volatile	100 % (water component)		
VOC (Weight %)	0 %		

## **10. STABILITY AND REACTIVITY**

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal temperatures and pressures.
Possibility of hazardous reactions	Hazardous polymerization will not occur. Hydrogen chloride gas is generated if mixed with a concentrated nonvolatile acid such as sulfuric acid.
Conditions to avoid:	Brine solution will slowly corrode metal in the presence of air.
Hazardous decomposition products (produced as a result of use, storage, spill and heating)	When heated above 801 °C (1474 °F), will emit hydrogen chloride gas and sodium oxides.

## **11. TOXICOLOGICAL INFORMATION**

Information on likely routes of exposure, including signs and symptoms related to the physical, chemical, and toxicological characteristics:

Skin contact	Prolonged and repeated skin contact may cause redness and dry skin.
Eye contact	Direct contact with eyes may cause mild irritation.
Inhalation	Prolonged inhalation may cause slight respiratory tract irritation.
Ingestion	May cause increased thirst. Massive ingestion may cause fluid/electrolyte imbalance, nausea, vomiting, diarrhea, weakness headache convulsions, and coma.

### Component Toxicity Data:

Component	LD <sub>50</sub> - Dermal	LD <sub>50</sub> - Oral	LC <sub>50</sub> - Inhalation
Sodium Chloride	> 10,000 mg/kg (Rabbit)	3550 mg/kg (Rat)	42 mg/L (Rat) 1-hr, aerosol
Water	Not listed	> 90 mL/kg (Rat)	Not listed

Information on toxicological effects:

Acute Toxicity	At reasonably possible exposures, sodium chloride is relatively not toxic to human health. It is a normal constituent of the body. This solution acts osmotically to remove water from the local tissue causing dehydration and/or electrolyte imbalance. Dried residue may be gritty and cause mechanical irritation.
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation that is reversible within the day of exposure.
Serious eye damage/eye Irritation	Direct contact with eyes may cause temporary irritation that is reversible within the day of exposure.
Respiratory sensitization	Not expected.
Skin sensitization	This product is not expected to cause skin sensitization in humans.
Carcinogenicity	Not classified as carcinogenic by IARC, U.S. NTP, U.S. OSHA, or ACGIH.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity Single exposure	Not classified.
Specific target organ toxicity repeated exposure	Not classified.
Aspiration hazard	Not classified.
Chronic effects	None known.
Human health impacts	Sodium in drinking water is a health concern for individuals restricted to low-sodium diets due to hypertension (high blood pressure).

**12. ECOLOGICAL INFORMATION**

Ecotoxicity: Not classified as environmentally hazardous. However, does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment by dehydrating animal and vegetative matter.

Aquatic toxicity responses (Sodium chloride, CAS 7647-14-5):

Test	Result	Species	Other
LC <sub>50</sub>	5840 mg/L	Lepomis Machrochirus (Bluegill fish)	96 hour
LC <sub>50</sub>	5480 mg/L	Daphnia magna (Water flea)	48 hour
EC <sub>50</sub>	2430 mg/L <sup>***</sup>	Algae	120 hour
NOEC/LOEC	5700 mg/L	Pimephales promelas (Fathead minnow)	7 day, biomass

Persistence	This material not classified as persistent in the environment.
Biodegradation	This material is inorganic and not subject to biodegradation. Sodium chloride's high solubility renders it very mobile, while its particle density makes it sink to the bottom of a surface waterbody. Its vapor pressure and Henry's Law constant indicate that it does not volatilize from air or water and moist soil surface. Sodium chloride may leach from soil into groundwater.
Bioaccumulative potential	This material has not been tested, but based on the components, it is believed not to bioconcentrate.
Partition coefficient n-octanol /water (log Kow)	Not available.
Mobility in soil	Very high.

Other adverse effects                      No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected.

### **13. DISPOSAL CONSIDERATIONS**

Disposal instructions                      Reuse or reprocess, if possible. Do not allow this material to drain into sewers or water supplies. Do not contaminate ponds, waterways or ditches with product. Dispose of contents in accordance with local, state, and federal regulations.

Hazardous waste code                      This material is not a listed or characteristic hazardous waste. However, processing, use or contamination of this product may change the waste management options.

Waste from residues/unused              Dispose of in accordance with local, state, and federal regulations.

Contaminated packaging                  Small containers should be emptied to the extent practical and disposed as ordinary trash.

### **14. TRANSPORT INFORMATION**

#### **US DOT (Highway/Rail)**

Not regulated.

#### **IATA (Air)**

Not regulated.

#### **IMO/IMDG (Water)**

Not regulated.

### **15. REGULATORY INFORMATION**

#### **U.S. federal regulations:**

OSHA regulatory status: This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

CERCLA Sections 102a/103, EPCRA, Hazardous Substance List (40 CFR 302.4), Reportable Quantity  
Not listed.

SARA Section 302, Extremely Hazardous Substance (EHS) Emergency Notification and Planning (40 CFR 355.30)  
Not regulated.

SARA Section 302, Extremely Hazardous Substance (40 CFR 355, Appendix A)  
Not listed.

SARA Section 311/312, Hazardous Chemical Reporting (40 CFR 370)  
Not regulated.

SARA Section 313, Toxic Release Reporting (40 CFR 372.65)  
Not listed.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpart D)  
Not regulated.

Clean Air Act (CAA) Section 112(b) Hazardous Air Pollutants (HAPs) List  
Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)  
Not regulated.

Safe Drinking Water Act (SDWA)  
Not regulated.

US state regulations:

Not listed US. Massachusetts Right-To-Know (RTK) - Substance List  
Not listed US. New Jersey Worker and Community Right-to-Know Act  
Not listed US. Pennsylvania RTK - Hazardous Substances  
Not listed US. Rhode Island RTK  
Not listed US. California Proposition 65

International Inventories:

Country or region	Inventory name	On inventory (yes/no)*
Australia	AICS Australian Inventory of Chemical Substances	Yes
Canada	DSL Domestic Substances List	Yes
Canada	NDSL Non-Domestic Substances List	No
China	IECSC Inventory of Existing Chemical Substances in China	Yes
Europe	EINECS European Inventory of Existing Commercial Chemical Substances	Yes
Europe	ELINCS European List of Notified Chemical Substances	No
Japan	ENCS Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	ECL Existing Chemicals List	Yes
New Zealand	NZIoC New Zealand Inventory	Yes
Philippines	PICCS Philippine Inventory of Chemicals and Chemical Substances	Yes
Taiwan	NECI National Existing Chemical Inventory	Yes
United States & Puerto Rico	TSCA Toxic Substances Control Act Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

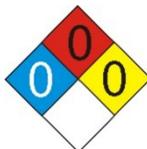
**16. OTHER INFORMATION**

Version 6 date: February 19, 2018

Revision history:

05-22-15 Initial version  
12-07-15 Reformatted and classified to GHS  
04-14-16 Section 9: Modified pH information  
04-27-16 Footer: Corrected Date Error in Footer  
07-14-16 Section 1: Added Other Means of Identification to SDS  
02-19-18 SDS reviewed with no changes

NFPA rating:



NFPA Hazard Scale: 0 - Minimal 1 - Slight 2 - Moderate 3 - Serious 4 - Severe

Abbreviations:

ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstracts Service
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CHEMTREC	Chemical Transportation Emergency Center
EC <sub>50</sub>	Half Maximal Effective Concentration - concentration of a material in water, a single dose which is expected to cause a biological effect on 50% of a group of test species.
EPCRA	Emergency Planning and Community Right-to-Know
GHS	Globally Harmonized Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMO	International Maritime Organization
IMDG	International Maritime Dangerous Goods
LC <sub>50</sub>	Lethal Concentration - median dose at which 50% of test animals die from inhalation
LD <sub>50</sub>	Lethal Dose - median dose at which 50% test animals die from oral or dermal exposure
LOEC	Lowest Observable Effect Concentration
NFPA	National Fire Protection Association
NIOSH	National Institute of Occupational Safety and Health
NOAEL	No Observable Adverse Effect Level
NOEC	No Observed Effect Concentration
NTP	National Toxicology Program
OSHA	Occupational Health and Safety Administration
PPE	Personal Protective Equipment
SARA	Superfund Amendments and Reauthorization Act
SDS	Safety Data Sheet
TSCA	Toxic Substances Control Act
US DOT	United States Department of Transportation

**WARRANTY**

Notice: The information above is believed to be accurate and represents the best information currently available to us. Seller warrants that this product conforms to its chemical description and is reasonably fit for the purposes stated on the label when used in accordance with directions under normal conditions of use, but neither this warranty nor any other warranty of merchantability or fitness for a particular purpose, express or implied, extends to the use of this product contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to seller, and buyer assumes the risk of any such use. In no way shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages, howsoever arising, even if the company has been advised of the possibility of such damages.