



# Material Safety Data Sheet

## ANGUS Chemical Company

**Product Name:** Sodium Chloride, USP Grade

**Issue Date:** 02/08/2010  
**Print Date:** 09 Feb 2010

ANGUS Chemical Company encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

### 1. Product and Company Identification

**Product Name**

Sodium Chloride, USP Grade

**COMPANY IDENTIFICATION**

ANGUS Chemical Company  
A Subsidiary of The Dow Chemical Company  
1500 East Lake Cook Road  
Buffalo Grove, IL 60089-0000  
USA

Customer Information Number: 800-258-2436

**EMERGENCY TELEPHONE NUMBER**

**24-Hour Emergency Contact:** 989-636-4400  
**Local Emergency Contact:** 989-636-4400

### 2. Hazards Identification

**Emergency Overview**

**Color:** Colorless to white

**Physical State:** Crystals

**Odor:** Odorless

**Hazards of product:**

CAUTION! May cause eye irritation. Isolate area.

**OSHA Hazard Communication Standard**

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

**Potential Health Effects**

**Eye Contact:** May cause eye irritation. May cause slight temporary corneal injury. Dust may irritate eyes.

**Skin Contact:** Brief contact is essentially nonirritating to skin. Prolonged contact may cause slight skin irritation with local redness. May cause more severe response if skin is abraded (scratched or cut).

**Skin Absorption:** Prolonged skin contact is unlikely to result in absorption of harmful amounts.  
**Inhalation:** Dust may cause irritation to upper respiratory tract (nose and throat).  
**Ingestion:** Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury. Excessive exposure may cause: Nausea and/or vomiting.  
**Effects of Repeated Exposure:** Medical experience with sodium chloride has shown a strong association between elevated blood pressure and prolonged dietary overuse. Related effects could occur in the kidneys.

### 3. Composition Information

Component	CAS #	Amount
Sodium chloride	7647-14-5	>= 99.0 - <= 100.0 %

### 4. First-aid measures

**Eye Contact:** Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.  
**Skin Contact:** Wash skin with plenty of water.  
**Inhalation:** Move person to fresh air; if effects occur, consult a physician.  
**Ingestion:** If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.  
**Notes to Physician:** No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.  
**Emergency Personnel Protection:** First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

### 5. Fire Fighting Measures

**Extinguishing Media:** This material does not burn. If exposed to fire from another source, use suitable extinguishing agent for that fire.  
**Fire Fighting Procedures:** Keep people away. Isolate fire and deny unnecessary entry. This material does not burn. Fight fire for other material that is burning. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this (M)SDS.  
**Special Protective Equipment for Firefighters:** Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.  
**Unusual Fire and Explosion Hazards:** None known.  
**Hazardous Combustion Products:** Fire conditions may cause this product to decompose. Refer to section 10 - Thermal Decomposition.

### 6. Accidental Release Measures

**Steps to be Taken if Material is Released or Spilled:** Contain spilled material if possible. Use care to minimize generation of airborne dust. Collect in suitable and properly labeled containers. See Section 13, Disposal Considerations, for additional information.

**Personal Precautions:** Isolate area. Keep unnecessary and unprotected personnel from entering the area. Refer to Section 7, Handling, for additional precautionary measures. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

**Environmental Precautions:** Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

## 7. Handling and Storage

### Handling

**General Handling:** Avoid contact with eyes. Wash thoroughly after handling. Avoid generating and breathing dust. Use with adequate ventilation. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

### Storage

Keep container tightly closed and dry. Keep in a cool place. Protect from atmospheric moisture.

## 8. Exposure Controls / Personal Protection

### Exposure Limits

Component	List	Type	Value
Sodium chloride	Dow IHG	TWA	10 mg/m <sup>3</sup>

### Personal Protection

**Eye/Face Protection:** Use safety glasses (with side shields). If there is a potential for exposure to particles which could cause eye discomfort, wear chemical goggles.

**Skin Protection:** Wear clean, body-covering clothing.

**Hand protection:** Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur. If hands are cut or scratched, use gloves chemically resistant to this material even for brief exposures. Examples of preferred glove barrier materials include: Neoprene. Polyvinyl chloride ("PVC" or "vinyl"). Nitrile/butadiene rubber ("nitrile" or "NBR"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

**Respiratory Protection:** Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. In dusty or misty atmospheres, use an approved particulate respirator. The following should be effective types of air-purifying respirators: Particulate filter.

**Ingestion:** Use good personal hygiene. Do not consume or store food in the work area. Wash hands before smoking or eating.

### Engineering Controls

**Ventilation:** Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

## 9. Physical and Chemical Properties

<b>Physical State</b>	Crystals
<b>Color</b>	Colorless to white
<b>Odor</b>	Odorless
<b>Odor Threshold</b>	Odorless
<b>Flash Point - Closed Cup</b>	No test data available
<b>Flammability (solid, gas)</b>	No
<b>Flammable Limits In Air</b>	<b>Lower:</b> No test data available <b>Upper:</b> No test data available
<b>Autoignition Temperature</b>	No test data available
<b>Vapor Pressure</b>	1 mmHg @ 865 °C <i>Supplier</i>
<b>Boiling Point (760 mmHg)</b>	1,413 °C (2,575 °F) <i>Supplier</i>
<b>Vapor Density (air = 1)</b>	No test data available
<b>Specific Gravity (H<sub>2</sub>O = 1)</b>	2.165 <i>Supplier</i> (water = 1)
<b>Freezing Point</b>	-20.5 °C (-4.9 °F) <i>Supplier</i> for 23% aqueous solution
<b>Melting Point</b>	801 °C (1,474 °F) <i>Supplier</i>
<b>Solubility in water (by weight)</b>	360 g/l @ 20 °C <i>Supplier</i>
<b>pH</b>	7 <i>Estimated</i> . 1% aqueous solution.
<b>Molecular Weight</b>	58.44 g/mol <i>Supplier</i>
<b>Molecular Formula</b>	Na.Cl
<b>Decomposition Temperature</b>	No test data available
<b>Evaporation Rate (Butyl Acetate = 1)</b>	Not applicable to solids
<b>Kinematic Viscosity</b>	Solid.

## 10. Stability and Reactivity

### Stability/Instability

Thermally stable at typical use temperatures.

**Conditions to Avoid:** Avoid moisture.

**Incompatible Materials:** Avoid contact with: Acids. Oxidizers. Bromine trifluoride. Corrosive to some metals.

### Hazardous Polymerization

Will not occur.

### Thermal Decomposition

Does not normally decompose. Decomposition products can include and are not limited to: Sodium oxides. Hydrogen chloride.

## 11. Toxicological Information

### Acute Toxicity

#### Ingestion

|| LD50, Rat 3,000 mg/kg

#### Dermal

|| LD50, Rabbit 10,000 mg/kg

#### Inhalation

|| The LC50 has not been determined.

### Serious eye damage/eye irritation

|| May cause eye irritation. May cause slight temporary corneal injury. Dust may irritate eyes.

### Skin corrosion/irritation

|| Brief contact is essentially nonirritating to skin. Prolonged contact may cause slight skin irritation with local redness. May cause more severe response if skin is abraded (scratched or cut).

#### **Sensitization**

##### **Skin**

|| No relevant information found.

##### **Respiratory**

|| No relevant information found.

#### **Repeated Dose Toxicity**

|| Medical experience with sodium chloride has shown a strong association between elevated blood pressure and prolonged dietary overuse. Related effects could occur in the kidneys.

#### **Chronic Toxicity and Carcinogenicity**

|| No relevant information found.

#### **Developmental Toxicity**

|| No relevant information found.

#### **Reproductive Toxicity**

|| No relevant information found.

#### **Genetic Toxicology**

|| In vitro genetic toxicity studies were predominantly negative.

## **12. Ecological Information**

### **ENVIRONMENTAL FATE**

#### **Movement & Partitioning**

|| No bioconcentration is expected because of the relatively high water solubility. Potential for mobility in soil is very high (Koc between 0 and 50). Partitioning from water to n-octanol is not applicable.

#### **Persistence and Degradability**

|| Biodegradation is not applicable.

### **ECOTOXICITY**

|| Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

#### **Fish Acute & Prolonged Toxicity**

|| LC50, fathead minnow (*Pimephales promelas*): 10,610 mg/l

#### **Aquatic Invertebrate Acute Toxicity**

|| LC50, water flea *Daphnia magna*: 4,571 mg/l

#### **Toxicity to Micro-organisms**

|| IC50, OECD 209 Test; activated sludge, respiration inhibition: > 1,000 mg/l

## **13. Disposal Considerations**

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. ANGUS HAS NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Incinerator or other thermal destruction device. Landfill.

**14. Transport Information**

**DOT Non-Bulk**  
NOT REGULATED

**DOT Bulk**  
NOT REGULATED

**IMDG**  
NOT REGULATED

**ICAO/IATA**  
NOT REGULATED

*This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.*

**15. Regulatory Information****OSHA Hazard Communication Standard**

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

**Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312**

<b>Immediate (Acute) Health Hazard</b>	No
<b>Delayed (Chronic) Health Hazard</b>	No
<b>Fire Hazard</b>	No
<b>Reactive Hazard</b>	No
<b>Sudden Release of Pressure Hazard</b>	No

**Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313**

To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

**Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Hazardous Substances List and/or Pennsylvania Environmental Hazardous Substance List:**

To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

**Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Special Hazardous Substances List:**

To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

**California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)**

This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

**US. Toxic Substances Control Act**

All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30

**European Inventory of Existing Commercial Chemical Substances (EINECS)**

The components of this product are on the EINECS inventory or are exempt from inventory requirements.

#### CEPA - Domestic Substances List (DSL)

All substances contained in this product are listed on the Canadian Domestic Substances List (DSL) or are not required to be listed.

## 16. Other Information

### Hazard Rating System

NFPA	Health	Fire	Reactivity
	1	0	0

### Recommended Uses and Restrictions

Life sciences research chemical. The ANGUS Chemical Company recommends that you use this product in a manner consistent with the listed use. If your intended use is not consistent with the stated use, please contact the Customer Information Group (see Section 1 of this data sheet).

### Revision

Identification Number: 62628 / 1031 / Issue Date 02/08/2010 / Version: 2.0

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

### Legend

N/A	Not available
W/W	Weight/Weight
OEL	Occupational Exposure Limit
STEL	Short Term Exposure Limit
TWA	Time Weighted Average
ACGIH	American Conference of Governmental Industrial Hygienists, Inc.
DOW IHG	Dow Industrial Hygiene Guideline
WEEL	Workplace Environmental Exposure Level
HAZ_DES	Hazard Designation
Action Level	A value set by OSHA that is lower than the PEL which will trigger the need for activities such as exposure monitoring and medical surveillance if exceeded.

ANGUS Chemical Company urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.