

**MATERIAL SAFETY DATA SHEET**  
**Emergency Telephone (262) 251-4977**

Name: **Alliance Group, Inc.** Address: N114 W18621 Clinton Drive  
City: Germantown State: Wisconsin Zip Code: 53022  
Product name: **CST-20**  
Product code: **0153**

**Section 2 Composition/Information on Ingredients**

Item #	CAS Number	Chemical Component	%	OSHA Hazard
01	7632-00-0	Sodium Nitrite	<20.0	Yes
02	12179-04-3	Sodium Tetraborate	<10.0	Yes
03	1310-73-2	Sodium Hydroxide	<5.0	Yes
04	64665-57-2	Sodium Tolytriazole	<1.0	Yes

**Section 3 Hazard Identification**

Physical State: Liquid  
Color: Colorless to faint yellow. Slight haze.  
Odor: No odor

**Emergency Overview: Danger!** Corrosive. Oxidizer. Causes severe burns to eyes, skin, and respiratory tract. May ignite organic materials and react with other materials. Harmful or fatal if swallowed. Do not get in eyes, on skin or clothing. May be harmful or fatal if inhaled. Avoid breathing mist or dust. Use with adequate ventilation.

**POTENTIAL HEALTH EFFECTS**

**ROUTES OF EXPOSURE:** Eyes. Ingestion. Inhalation. Skin. Absorption.

**TARGET ORGANS:** Eyes. Skin. Respiratory System.

**EYE CONTACT: CORROSIVE** – Causes severe irritation and burns. May cause: permanent eye damage. Blindness. Corneal damage. Mist may cause: Irritation. High vapor concentrations may cause: Tissue destruction. Effects may vary depending on length of exposure, solution concentration and first aid measures.

**SKIN CONTACT: CORROSIVE** – Causes severe irritation and burns. Corrosive action causes burns and frequently deep ulceration with ultimate scarring. Note that irritation may follow an initial latency. The latency may vary as much as hours for dilute solutions to minutes for more concentrated solutions. Prolonged or repeated contact can cause a high degree of tissue destruction. Large amounts can cause: Redness. Swelling.

**SKIN ABSORPTION:** May be absorbed through skin. May be absorbed through damaged skin.

**INGESTION: CORROSIVE**-Causes severe irritation and burns. May cause damage to the mouth. Esophagus. Stomach. May be fatal if swallowed. Ingestion can cause severe burns and complete tissue perforation of the mucous membranes of the mouth, throat and stomach. May cause: Abdominal pain. Weakness. Headache. Nausea. Vomiting. Gastrointestinal disturbances. Diarrhea. Abdominal distress. Methemoglobin formation. Cyanosis. Convulsions. Collapse. Coma. Death.

**INHALATION: CORROSIVE**-Causes severe irritation and burns. Harmful if inhaled. Dust or mists may cause damage to the: upper respiratory tract. Lungs. May cause: shortness of breath. Wheezing. Chest pain. Pneumonitis. Choking. Impaired lung function. Mist may irritate: nose. Mouth. Throat. Mucous membranes. Respiratory tract. Inhalation of large amounts of mist may cause: central nervous system

effects. Visual disturbances. Mental disturbances. May produce signs and symptoms of toxicity similar to those described for swallowing.

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE TO PRODUCT:** Skin disorders. Lung disorders. Cardiovascular disorders. Eye disorders.

**OTHER:** Chronic exposure to nitrites may cause headaches, visual problems, and decrease blood pressure. Nitrites may react with secondary and tertiary amines to form nitrosamines, which are animal carcinogens. Due to the possibility of nitrosamine formation, sodium nitrite is not used in metalworking fluids containing amines. Animal ingestion studies in several species, at high doses, indicate that borates can cause reproductive and developmental effects. A human study of occupational exposure to borate dust showed no adverse effects on reproduction.

**CANCER INFORMATION:** This product does not contain greater than 0.1% of the known or potential carcinogens listed in NTP, IARC, or OSHA.

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#### Section 4 First Aid Measures

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**First Aid Procedure - Never give fluids or induce vomiting if patient is unconscious or having convulsions.**

**CALL A PHYSICIAN**

**Eyes:** Flush eyes with large quantities of cool water for at least 15 minutes. Washing eyes within 1 minute is essential. Get medical attention immediately.

**Skin:** Immediately wash with water for 15 minutes. Remove contaminated clothing and footwear. Wash clothing before reuse. Discard footwear which cannot be decontaminated. Do not apply oils or ointments unless ordered by a physician. If skin feels slippery, caustic may still be present in sufficient quantities to cause rash or burn. Continue washing skin until slick feeling is gone. Get medical attention immediately.

**Ingestion:** Give a quart of water. **DO NOT INDUCE VOMITING.** If vomiting occurs spontaneously keep head below hips to prevent aspiration of liquid into lungs. If unconscious or in convulsions, take immediately to a hospital or a physician. NEVER induce vomiting or give anything by mouth to an unconscious victim. After dilution with water, fruit juice or diluted vinegar may be administered to accomplish neutralization. Several glasses of milk or several ounces of milk of magnesia may be given for their soothing effect.

**NOTE TO PHYSICIANS:** Sodium nitrite forms methemoglobin in the blood stream. Treat accordingly.

**Inhalation:** Remove from contaminated atmosphere to fresh air. If breathing has stopped resuscitate (mouth to mouth) and administer oxygen. Get medical attention immediately.

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#### Section 5 Fire Fighting Measures

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Flash Point: N.A. Flammable Limits: LEL: N.A. UEL: N.A.  
Autoignition Temperature: No data

**EXTINGUISHING MEDIA:** For fires in area use appropriate media. For example: Water fog, Alcohol Foam, CO2. Use flooding amounts of water in early stages of fire. **DO NOT USE:** Dry chemical extinguisher containing ammonium compounds.

**FIRE FIGHTING METHODS:** Evacuate area of unprotected personnel. Wear protective clothing and NIOHA approved pressure-demand self contained breathing apparatus, and full protective suit should be used by firefighters in areas where product is stored. Remain upwind of fire to avoid hazardous vapors and decomposition products. Use water spray to cool fire-exposed containers. Avoid getting water into containers. Product generates heat upon addition of water, with possible spattering. If container is not properly cooled, it can rupture in the heat of a fire. Water runoff can cause environmental damage. Dike and collect water used to fight fire.

**FIRE AND EXPLOSION HAZARDS:** If evaporated to dryness, residue is an oxidizer and can stimulate or accelerate combustion of organic or other combustible materials. Material explodes when heated to 1000 F or upon contact with cyanides. This product may react with certain metals to produce flammable Hydrogen gas.

**HAZARDOUS COMBUSTION PRODUCTS:** Carbon dioxide. Carbon monoxide. Nitrogen oxides. Hydrogen cyanide possible in reducing atmospheres. Hydrogen gas.

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## Section 6 Accidental Release Measures

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### **STEPS TO BE TAKEN IN CASE OF SPILLS:**

**CORROSIVE MATERIAL. STRONG OXIDIZER.** Eliminate all sources of ignition. Evacuate unprotected personnel from area. Maintain adequate ventilation. Follow personal protective equipment recommendations found in Section 8. Never exceed any occupational exposure limit. Leaks should be stopped. Spills should be contained and cleaned up immediately. Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container. Avoid runoff into storm sewers and ditches, which lead to waterways. Follow all government regulations. Acting cautiously, remaining residue can be neutralized with dilute Hydrochloric Acid solutions and then disposed of properly. Avoid direct discharge to sewers and surface waters. Notify authorities if entry occurs.

**CAUTION:** Caustic soda may react violently with acids and water. Note: Product will not burn, but dried down material is an oxidizer; can cause nearby combustible materials to burn more readily.

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## Section 7 Handling and Storage

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**STORAGE:** **CORROSIVE MATERIAL. STRONG OXIDIZER.** Keep container tightly closed when not in use. Store in cool, dry, well ventilated, secure area away from all sources of ignition and out of direct rays of sunlight. Do not store in unlabeled or mislabeled containers. Do not freeze. Keep away from incompatible materials. Store only in containers, which are resistant to caustic solutions. Highly corrosive to most metals with evolution of hydrogen gas. Avoid contact with combustible materials, wood and organic materials. Diking of storage tank is recommended.

**HANDLING:** Do not get in eyes or on skin or clothing. Avoid storing next to strong acids. Avoid excessive heat. Wash thoroughly after handling. Exposure can cause burns, which are not immediately visible. Use with adequate ventilation. Do not swallow. Avoid breathing vapors, mists, or dust. Do not eat, drink or smoke in work area. Corrosive material. Avoid dust or mist formation. Add product very slowly while stirring constantly. If product is added too rapidly or without stirring and becomes concentrated at the bottom of the mixing vessel, excessive heat may be generated resulting in dangerous boiling and spattering and possible immediate violent irruption of highly caustic solution.

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## Section 8 Exposure Controls/Personal Protection

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### Engineering Controls:

Local exhaust ventilation, process enclosures, or other engineering controls are required when handling or using this product to avoid overexposure. Maintain adequate ventilation. Do not use in close or confined spaces. Avoid creating dust or mist. Keep levels below exposure limits. To determine exposure levels, monitoring should be performed regularly.

### Respiratory Protection:

Respiratory protection may be required when handling this product. If exposure limits are exceeded, wear NIOSH-Approved air-purifying respirator for Dust/mist filter. NIOSH-Approved self-contained breathing apparatus. Do not exceed limits established by the respirator manufacturer. All respiratory protection programs must comply with OSHA 29 CFR 1910.134 and ANSI Z88.2 requirements and must be followed whenever workplace conditions require a respirator's use.

### Eye/Face Protection:

Face shield and chemical goggles. Do not wear contact lenses.

### Skin Protection:

Prevent contact with this product. Wear gloves and protective clothing depending on conditions of use. Protective Gloves: Chemical-resistant, Rubber, Nitrile, Polyvinyl chloride, Neoprene.

### Other Protective Equipment:

Eye wash station, safety shower. Rubber apron, Chemical safety shoes, rubber boots, protective clothing.

### General Hygienic Practices:

Wash hands with soap and water before eating and at the end of each work shift. Good manufacturing practices require gross amounts of any chemical be removed from skin as soon as practical, especially before eating or smoking.

#### Exposure Limits

Item	ACGIH		OSHA	
	TLV-TWA	TLV-STEL	PEL-TWA	PEL-CEILING
Sodium Nitrite	N.E.	N.E.	N.E.	N.E.
Sodium Tetraborate	1 mg/m <sup>3</sup>	N.E.	10 mg/m <sup>3</sup>	N.E.
Sodium Hydroxide	N.E.	2 mg/m <sup>3</sup>	N.E.	N.E.
Sodium Tolytriazole	N.E.	N.E.	N.E.	N.E.

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## Section 9 Physical Data

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Solid: Liquid: X	Appearance: Light Yellow
Specific Gravity: 1.25	Odor: Slight odor
Solubility in water: Complete	pH: >12.0
% Volatiles: N.D.	Freezing Point: N.D.
Boiling Point: N.D.	Vapor Density: N.D.
Vapor Pressure: N.D.	Evaporation Rate: N.D.
Coefficient of water/oil distribution: N.D.	

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## Section 10 Stability and Reactivity

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**Product Stability:** Stable under normal conditions

**Hazardous Polymerization:** Will not occur under normal conditions

**Conditions to avoid:** Contact with water may cause violent reaction with evolution of heat. To dilute: Add product slowly to lukewarm water; not water to product. Heat sparks and open flame. Product absorbs carbon dioxide from the air. Keep container closed when not in use. Contact with acid or incompatible

materials may cause a violent reaction with evolution of heat. Heat, especially heating a dryness, increases the probability and the hazard of oxidizing reactions (see Incompatibility). Solutions are oxidized by air. **Incompatibility:** Strong oxidizing agents. Acids. Food sugars. Deadly carbon monoxide gas can form in enclosed or poorly ventilated areas or tanks when alkaline products contact food, beverages, or dairy products. Do not enter such areas until they have been well ventilated and carbon monoxide and oxygen levels have been determined to be within OSHA acceptable limits. If carbon monoxide and oxygen levels cannot be determined to be within OSHA acceptable limits wear NIOSH approved self contained breathing apparatus. Metals such as aluminum, zinc, tin, etc.. Acids, Phosphorus pentoxide, organic materials, organic nitro compounds, chlorinated hydrocarbons, fluorinated hydrocarbons, acetaldehyde, chlorine trifluoride, hydroquinone, maleic anhydride, tetrahydrofuran, acrolein, phosphorus, trichloroethylene, leather, wool, reducing agents, (particularly cyanides, thiocyanates, and thiosulfides). Flammable materials, combustible materials, sulfites, metabisulfites, ammonium compounds, amines, water reactive substances.

**Hazardous Decomposition Products:** CO, CO<sub>2</sub>, Nitrogen oxides. Reacts with phosphorus to form spontaneously flammable phosphine. Reacts with trichloroethylene to form spontaneously flammable dichloroacetylene. Acids can cause the formation of nitrogen oxides. Hydrogen cyanide possible in a reducing atmosphere.

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### Section 11 Toxicological Properties

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No product or component toxicological information is available.

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### Section 12 Ecological Information

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No information available

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### Section 13 Disposal Considerations

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Hazardous Waste Number: D002

Dispose of in a permitted hazardous waste management facility following all federal, state and local regulations. Since emptied containers retain product residue, follow label warnings even after container is emptied. DO NOT pressurize, cut, weld, solder, drill, grind, or expose empty containers to heat, flame, sparks or other sources of ignition

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### Section 14 Transportation Information

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DOT Proper Shipping Name: Corrosive Liquid, Basic, Inorganic, NOS

DOT Technical Name: Sodium Hydroxide, Sodium Nitrite

DOT Hazard Class: Class 8

DOT UN/NA Number: UN3266 Packing Group II Resp. Guide Page: 154

Reportable Quantity (RQ): 1000 lbs (sodium hydroxide)

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### Section 15 Regulatory Information

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#### **FEDERAL REGULATIONS**

TSCA Inventory Status:

All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements. Requires export notification (Section 12b). Subject to SNUR if used in metalworking fluid (40 CFR 721.4740). Sodium tetraborate pentahydrate appears on the U.S. EPA TSCA Inventory under the cas# representing the anhydrous form of this inorganic salt (14330-43-4).

SARA Title III Section 311/312 Category:

Immediate (acute) Health Hazard: YES

Delayed (Chronic) Health Hazard: YES

Fire Hazard: NO

Sudden Release of Pressure Hazard: NO

Reactive Hazard: YES

SARA Section 302/304/313/HAP

COMPONENT	RQ (LBS) (*1)	RQ (LBS) (*2)	TPQ (LBS) (*3)	SEC 313 (*4)	HAP (*5)
Sodium Nitrite	100	N.A.	N.A.	YES	NO
Sodium Tetraborate	N.A.	N.A.	N.A.	NO	NO
Sodium Hydroxide	1000	N.A.	N.A.	No	NO
Sodium Tolytriazole	N.A.	N.A.	N.A.	NO	NO

FOOTNOTES

\*1 = CERCLA Reportable Quantity

\*3= SARA EHS Threshold Planning Qty.

\*2 = SARA Reportable Quantity

\*4= SARA 313 Toxic Chemical/Category

\*5= U.S. EPA Hazardous Air Pollutant

**STATE REGULATIONS**

California- The following components are listed under Prop 65:  
No data available

Wisconsin-The following components are listed as a Wisconsin HAP:  
Sodium hydroxide. Borates, tetra, sodium salts, pentahydrate.

**Section 16 Other Information**

**HMIS Rating**

**NFPA Rating**

Health 3\*

Health: 3

Flammability 0

Flammability: 0

Reactivity 1

Reactivity: 1

\*=Chronic Health Hazard

MSDS Abbreviations: N.A. = Not Applicable  
N.D. = Not Determined  
HAP = Hazardous Air Pollutant  
VOC = Volatile Organic Compound  
C = Ceiling Limit  
N.E./Not. Estab. = Not Established

The above information is believed to be accurate and discloses the known hazards for this product as of this date. No additional warranties are made. Date: December 4, 2001 By: D.C. Miller