

**SAFETY DATA SHEET**

Texas Correctional Industries  
Texas Department of Criminal Justice

**Date Issued:** December 2020

**Supersedes:** September 2016

**SECTION 1 - IDENTIFICATION**

**Product Name:** Chlorinated Dishwashing Compound

**General Use:** Auto Machine Dishwashing  
**Manufacturer Name:** Texas Correctional Industries  
Roach Soap & Detergent Plant  
15845 FM 164  
Childress, TX 79201

**Emergency Telephone Numbers**

Texas Poison Center Network (TPCN) : 1-800-222-1222  
Roach Soap & Detergent Plant Lab: 940-937-6364 EXT. 7392  
SDS available at: [www.tci.tdcj.texas.gov](http://www.tci.tdcj.texas.gov)  
Monday thru Thursday: 5:30 AM – 3:30 PM

**SECTION 2 - HAZARD IDENTIFICATION**

Primary Route of Exposure : Eyes, Skin, Oral, or inhalation

Signs and Symptoms of Over Exposure (acute)

Eyes : Corrosive to eyes; will cause eye irritation or injury  
Skin : Contact may cause irritation; avoid exposure  
Ingestion : May cause gastrointestinal irritation; Do not ingest this product  
Inhalation : Do not inhale this product

Signs and Symptoms of Over Exposure (chronic) : None known

Medical Condition Aggravated by Over Exposure : Not known

Carcinogen or Suspect of Carcinogen Ingredients : None

GHS Hazard and/or Precautionary Numbers: H302, H335, H319, H290, H400, H410

**SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical/Common Name	CAS No.	PERCENT	ACGIH/OSHA		WHMIS
			TWA	PEL	
Sodium Metasilicate	6834-92-0	12 - 14	N/D	3 mg/m <sup>3</sup>	1%
Sodium Dichloroisocyanurate	51580-86-0	2 - 3	1.5 mg/m <sup>3</sup>	N/D	N/D
Sodium Carbonate	497-19-8	22 - 23	N/D	5 mg/m <sup>3</sup>	1%
Sodium Sulfate	7757-82-6	9 - 10	10 mg/m <sup>3</sup>	5 mg/m <sup>3</sup>	N/D

N/A= Not Applicable

N/D = Not Determined

Threshold Limit Values (TLV): TWA (time-weighted average for 8 hr. day); PEL (personal exposure limit)

WHMIS – minimum amount necessary in a mixture to trigger reporting: 1% (hazardous chemical); 0.1% (extremely hazardous chemical)

**SECTION 4 - FIRST AID MEASURES**

Eyes : Do not get in your eyes. Flush with plenty of water for 15 minutes, until irritation subsides.  
Skin : Immediately brush off any excess and flush skin with large quantities of water; seek medical attention if irritation

- develops
- Ingestion : Rinse mouth thoroughly. Drink plenty of milk, egg whites, or gelatin solution; do not induce vomiting; Contact a physician immediately.
- Inhalation : Do not breathe dust. Move exposed individual to fresh air.

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## SECTION 5 - FIRE FIGHTING MEASURES

- Flammable Limit : N/D
- Physical Hazard : None
- Extinguishing Media : Water and foam
- Fire Extinguishing Procedure: : Use of respiratory equipment is recommended in enclosed areas
- Fire and Explosive Hazard: : Large containers of product that become wet may lead to HCL<sub>3</sub> formation

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## SECTION 6 - ACCIDENTAL RELEASE MEASURES

- Steps to be taken if released or spilled : Gather all materials practical for salvage or disposal. Rinse residue with water.

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## SECTION 7 - HANDLING AND STORAGE

Store in a cool dry ventilated area. Exothermic reaction with water. Keep container sealed/closed when not in use. Avoid dust formation. Observe Building Code and NFPA storage requirements for chlorinated compounds.

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## SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

- Respiratory Protection : Use an appropriate respirator approved for corrosive and chlorinated dust if product dust exceeds exposure limits.
- Ventilation Requirement : Yes
- Protective Gloves : Nitrile; acrylonitrile rubber, acrylonitrilebutadiene rubber, nitrile-butadiene rubber
- Eye Protection : Chemical goggles

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## SECTION 9 - PHYSICAL PROPERTIES

- Vapor Pressure : N/D
- Specific Gravity (water = 1) : N/D
- Solubility in Water : Complete
- pH (1% aqueous solution) : 12 - 13
- Boiling Point : N/A
- Appearance and Odor : White to off white granular powder with a slight chlorine-type odor.

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## SECTION 10 - PHYSICAL AND CHEMICAL PROPERTIES

- Hazardous Decomposition : Chlorine gas and trace amounts of phosgene are possible
- Stability : Stable
- Incompatibility : Inorganic acids and bases; combustibles; nitrogen containing compounds such as ammonia, urea, amines, etc

NOTE: The C### notation refers to a principal component based on the amounts present in the product which may involve trade secret chemicals. In the event of an accident, notify the Poison Control Center for more information.

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## SECTION 11 – TOXICOLOGICAL INFORMATION

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- LD50 (oral, rat): 6500 mg/kg (8)
- LD50 (oral, rat): 3900 mg/kg (9, unconfirmed)
- LD50 (oral, mouse): 3210 mg/kg (9,10 unconfirmed)

- Skin Irritation (rabbit, guinea pig): Negligible irritation and no visible tissue damage

was observed after a 50% solution was applied to intact and abraded skin.(I)

Effects Of Long-Term Ingestion:

Kidney damage was observed in rats fed a diet containing 2% or 10% sodium tripolyphosphate for one month, but not in animals fed 0.2%.(10) Kidney damage was also observed in rats fed 3% sodium tripolyphosphate for 6 months and 5% for 2 years. No detectable toxic effects were observed following ingestion of 1.8% in the diet for 6 months and 0.5% for 2 years.(10)

Additional toxicological information:

No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

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Eye irritation:

Severe irritation(rabbit)

Skin irritation:

Non-irritating to the skin

LD50 oral:

2800 mg/kg (Rm)

LD50 Dermal:

> 2000 mg/kg (gerbil)

LC50 Inhalation:

800 mg/m<sup>3</sup> (guinea pig)

Sensitization:

Patch test on human volunteers did not demonstrate sensitization properties

Chronic Toxicity:

No known effects

Carcinogenicity:

Not recognized as carcinogenic by Research Agencies (IARC,NTP, OSHA, ACGIH)

C056

IRRITATION DATA:

250 mg/24 hour(s) skin-human: severe;  
250 mg/24 hour(s) skin-rabbit: severe;  
250 mg/24 hour(s) skin-guinea: pig moderate

TOXICITY DATA:

Sodium Metasilicate

Component LD50 Oral: 600 mg/kg (Rat)

ACUTE TOXICITY:

Sodium metasilicate can produce caustic burns (i.e., colliquative necrosis) and induce hypocalcaemia by binding calcium. Oral administration of sodium metasilicate to rats and mice (1153 and 770 mg/kg, respectively) produced ulceration or bleeding in the stomach, duodenum, and small intestine. Oral doses of a 20% solution (464, 1000, 2150, and 4640 mg/kg produced gasping, dyspnea, acute depression, and/or nasal discharge at 1000 mg/kg; and the highest dose caused death. Injection of a neutralized 2.0% sodium metasilicate solution (1200 mg/kg on day 1 and 800 mg/kg on days 2 and 3) decreased rat spleen weight by 60% and increased kidney weight. Microscopic lesions of the lymphatic tissues and cellular damage in the intestinal mucosa were also observed.

CHRONIC TOXICITY:

No data were available regarding chronic exposure, reproductive or teratological effects, or carcinogenicity for sodium metasilicate.

CARCINOGENICITY: This product is not classified as a carcinogen by NTP, IARC or OSHA.

MUTAGENIC DATA: In assays using *Bacillus subtilis* strains without metabolic activation, sodium metasilicate (0.005-0.5M) was not genotoxic.

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## SECTION 12 – ECOLOGICAL INFORMATION

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N/A

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Ecotoxicity

sodium carbonate(497-19-8): Table

Active Ingredient(s)	Duration	Species	Value	Units
sodium Carbonate	6h LC50	Bluegill sunfish	300	mg/L
Sodium Carbonate	8h EC50	Ceriodaphnia	200-227	mg/L

Persistence and degradability: N/A  
Bioaccumulation: N/A  
Mobility: Dissociates into ions.  
Other adverse effects: None known

C056

ECOTOXICITY DATA: Aquatic Toxicity: This material has exhibited moderate toxicity to aquatic organisms.

FATE AND TRANSPORT:

BIODEGRADATION: This material is inorganic and not subject to biodegradation.

PERSISTENCE: This material is believed to persist in the environment.

BIOCONCENTRATION: This material is not expected to bioconcentrate in organisms.

ADDITIONAL ECOLOGICAL INFORMATION: This material has exhibited slight toxicity to terrestrial organisms.

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## SECTION 13 – DISPOSAL CONSIDERATIONS

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Review federal, provincial and local government requirements prior to disposal. Store material for disposal as indicated in Storage Conditions. Disposal by secure landfill may be acceptable.

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Waste Disposal methods: This material as supplied is not a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether altered

material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated packaging:

Where possible recycling is preferred to disposal or incineration. Clean container with water. Dispose of rinse water in accordance with local and national guidelines.

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Reuse or recycle if possible. Dispose in accordance with all applicable regulations. May be subject to disposal regulations: U.S. EPA 40 CFR 261. Hazardous Waste Number(s): D002 (Corrosive).

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## SECTION 14 – TRANSPORT INFORMATION

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U.S. DEPARTMENT OF TRANSPORT (DOT)  
HAZARDOUS MATERIALS SHIPPING  
INFORMATION (49 CFR):

This chemical is not specifically listed in the U.S. hazardous materials shipping regulations (49 CFR, Table 172-101). However it may be regulated as part of a chemical family or group Not Otherwise Specified (N.O.S.) (cg. mercury- based pesticides). Consult the regulation.

NOTE :

This information (Docket No. HM-215A) was taken from the U.S. Federal Register, Vol. 59, no. 249 (December 1994) and is effective October 1, 1996.

U.S. OCCUPATIONAL SAFETY AND  
HEALTH ADMINISTRATION (OSHA)  
HAZARD COMMUNICATION STANDARD  
(29 CFR 1910.1200)

OSHA HAZARD COMMUNICATION  
EVALUATION :

Does not meet criteria for hazardous material, as defined by 29 CFR 1910.1200.

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DOT:  
TDG:  
CAQ/IATA:  
IMDG/IMO:

not regulated  
not regulated  
not regulated  
not regulated

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U.S. DOT 49 CFR 172.101:  
PROPER SHIPPING NAME:

UN NUMBER: UN3262  
Corrosive solid, basic, inorganic, n.o.s.  
(Sodium Metasilicate)

HAZARD CLASS:  
PACKING GROUP:  
LABELING:  
REQUIREMENTS

DIVISION: 8  
11  
8

## SECTION 15 – REGULATORY INFORMATION

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Label Hazard Warnings: CAUTION! MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT. MAY BE HARMFUL IF SWALLOWED OR INHALED.

Label Precautions: Keep container closed.  
Use with adequate ventilation.  
Avoid breathing the dust.  
Wash thoroughly after handling.  
Avoid contact with, eyes, skin and clothing.

Label First Aid: If inhaled, remove to fresh air. Get medical attention for any breathing difficulty.  
In case of contact, immediately flush eyes or skin with plenty of Water for at least 15 minutes. Get medical attention if irritation develops or persists. If swallowed, give large amounts of water to drink. Never give anything by mouth to an unconscious person. Get medical attention.

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U.S. Federal Regulations SARA 313: Section 313 of Title III of the Superfund Amendments and Reauthorization Act. of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories:

Acute Health Hazard: yes  
Chronic Health Hazard: no  
Fire Hazard: no  
Sudden Release of pressure Hazard: no  
Reactive Hazard: no

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act. (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act. (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

C056

U.S. REGULATIONS

OSHA REGULATORY STATUS: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

CERCLA SECTIONS 102a/103: HAZARDOUS SUBSTANCES (40 CFR 302.4) Not regulated.

EPCRA EXTREMELY HAZARDOUS: Not regulated

SUBSTANCES (40 CFR 355.30)

\_ EPCRA SECTIONS 311/312  
HAZARD CATEGORIES:  
(40 CFR 370.10)

Acute Health Hazard

EPCRA SECTION 313:  
(40 CFR 372.65)

Not regulated.

OSHA PROCESS SAFETY (PSM):  
(29 CFR 1910.119)

Not regulated

FDA:

Sodium Silicates have Generally Recognized as Safe (GRAS) status under specific FDA regulations. Refer to 21 Code of Federal Regulations (CFR) 173, 175, 176, 177, 182, and 184, which is accessible on the FDA's website. This product is not produced under all current Good Manufacturing Practices (cGMP) requirements as defined by the Food and Drug Administration (FDA).

NATIONAL INVENTORY STATUS:

U.S. INVENTORY STATUS:  
Toxic Substance Control Act:  
TSCA 12(b):

All components are listed or exempt  
This product is not subject to export  
notification

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SECTION 16 – OTHER INFORMATION

Federal Hazardous Substances Act statutes and Consumer Product Safety Commission regulations: 16 CFR 1500.14(b)(3) and 1500.83(a)(13).

\*SDS updated by: Timothy Sharpe, TCI Chemist, Childress, TX

Note: Product should be used as directed on the label and no other use is permitted. No warranty is implied expressly or otherwise regarding the accuracy of the information in the product's suitability for the consumer's use and the outcome of its use. The technical accuracy of the information submitted herein is based on the data submitted to TCI by the manufacturers for the materials used in this finished product.