MATERIAL SAFETY DATA SHEET

Complies with OSHA Hazard Communications Standard 29 CFR 1910.1200

Product Desc: N.C.C.E. Powdered Laundry Detergent
Product Code 55-1790-00 HMIS codes H F R P
3 0 0 X (See Section VIII)

Section I: Manufacturer Information

Name: N.C. Dept. of Correction, Janitorial Products Plant
Mailing Address: 231 Soul City Boulevard
City/State/ Zip: Norlina, North Carolina 27563
Telephone: **For Information-** (252) 456-1168
For Emergency - CHEMTREC - 1-800-424-9300
Date Prepared: September, 1994 **Date Revised:** April 15, 2008
Contact For Technical Information: Plant Manager
Telephone: (252) 456-1168 **Fax:** (252) 456-2907

Section II: Composition/Information on ingredients and exposure guidelines

COMPONENTS (Chemical Name and Synonyms)	CAS NO.	TYPICAL % BY WEIGHT	NCOS PEL	ACGIH TLV
*Sodium Sulfate	7757-82-6	31 - 35	NE	NE
*Sodium Carbonate, Anhydrous	497-19-8	33 - 37	NE	NE
*Sodium Metasilicate, Anhydrous	6834-92-0	16 - 19	NE	NE
CSP-40D Detergent	Trade Secret	4 - 6	NE	NE
Sodium Tripolyphosphate	7758-29-4	3 - 6	NE	NE
*Nonylphenol Ethoxylate	9016-45-9	1 - 3	NE	NE
Sodium CMC (Cellulose, Carboxymethyl Ether, Sodium Salt)	9004-32-4	< 1	NE	NE
Lemon Fragrance	Trade Secret	< 1	NE	NE
*2-Butoxyethanol	111-76-2	< 1	25 ppm TWA (Skin)	20ppm TWA

*Tetrasodium Pyrophosphate	7722-88-5	< 1	5mg/m³ TWA	5mg/m³ TWA
Optical Brightener	Trade Secret	< 1	NE	NE

*These substances are hazardous chemicals as defined by the hazard communication standard (29 CFR 1910.1200) NE: Not Established. Product may release dust subject to the following exposure limits:
Nuisance Dust Particulates: PEL = 15 mg/m³ TWA (Total dust); 5 mg/m³ TWA (Respirable fraction), ACGIH TLV = 10 mg/m³ TWA (Total dust)

Section III: Hazards Identification

EMERGENCY OVERVIEW

White granular free-flowing powder with a lemon fragrance. **Corrosive.** A severe eye and skin irritant. Contact with eyes may cause burns and eye injury. Inhalation of dusts may cause respiratory irritation and injury. May be harmful or fatal if swallowed. For large spills emergency responders should wear chemical resistant gloves, safety goggles, and respiratory protection if dust is formed. Do not breathe dust. To avoid foaming problems, do not use water to flush away spills. Vacuum or sweep up material and transfer to a suitable container for reuse or disposal. See Sections III, VI and XIII.

Potential Health Effects and Primary Routes of Entry:

Eyes: A severe eye irritant. Eye contact may cause severe irritation, pain, excess blinking, and tear production, redness, swelling, chemical burns and possible blindness if not treated promptly.
Inhalation: Inhalation of dust may cause irritation and inflammation of the respiratory tract and mucous membranes and tissue damage due to the product's alkalinity. Repeated inhalation of dust may also aggravate existing respiratory conditions and may cause nasal discomfort and discharge, chest pain, coughing, and sneezing.
Skin: Corrosive. Skin contact may cause irritation, discomfort, pain, redness, burning, and possible tissue destruction if not treated promptly. Prolonged skin contact may lead to absorption of potentially harmful amounts of certain ingredients. Repeated skin contact may cause dermatitis.
Ingestion: Ingestion may cause burning or pain in the mouth, throat, chest, and abdomen, nausea, vomiting, diarrhea, hemorrhages of the intestines, and even death.

Chronic Effects/ Carcinogenicity: None of the components in this product at **concentrations** of 0.1% or greater are listed by the NTP, IARC or OSHA as carcinogens.

Ingredients in this product have been tested in laboratory animals. Studies with laboratory animals exposed to high doses of the surfactant in this product by skin contact indicate that such conditions may result in inflammatory changes in the lung. Developmental (teratogenic) effects were observed in the fetuses of rats treated with the surfactant.

Experimental reproductive effects have been observed in rats ingesting or injected with large doses of certain ingredients. Long term ingestion of sodium metasilicate may affect the kidneys.
For complete discussion of the toxicology data from which this evaluation was made, please refer to Section XI.

Section IV: First Aid

Eyes: Immediately flush eyes with water for at least 20 minutes and seek immediate medical attention. Eyelids should be held away from the eyeballs to ensure thorough rinsing.
Skin: Immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Seek medical attention if irritation develops and persists. Launder clothing before reuse.
Inhalation: Move victim to fresh air, administer artificial respiration if not breathing. Give oxygen if breathing is difficult. Trained person should give oxygen if breathing is difficult. Get medical attention.
Ingestion: Do not induce vomiting. Get medical attention immediately. If victim is fully conscious, give plenty of water. Never give anything by mouth to an unconscious person. If vomiting occurs spontaneously, keep airway clear and give more water. Contact National Poison Control Center at 1-800-222-1222 (24 hr.) for advice.

Medical Conditions Generally Aggravated By Exposure: Individuals with pre-existing lung diseases, asthma, and abrasions of the skin may be more susceptible to the effects of excessive exposure to this product.

Section V: Fire and Explosion Data

Flash Point: >200° F. Non-combustible
Flammable Limits: Not applicable
Extinguishing Media: If this product is involved in a fire, use extinguishing agent that is appropriate for combustibles in the area such as water spray, dry chemical, alcohol foam, or carbon dioxide-type extinguishers.
Fire and Explosion Hazards: During fire, smoke and irritating fumes may be emitted. When heated to decomposition, the product can emit carbon monoxide, carbon dioxide, and oxides of sodium, nitrogen, and sulfur. Surfactant can thermally decompose at temperatures above 250° C.
Fire-Fighting Equipment: Exposed firefighters should wear NIOSH approved self-contained breathing apparatuses under positive pressure and chemical-resistant protective equipment. Refer to Section VIII for further information.

Section VI: Accidental Release Measures

Cleanup personnel should wear appropriate equipment such as rubber gloves, tight fitting safety goggles, and respiratory protection if dust is formed (See Section VIII). Vacuum or sweep up material and transfer to a suitable container for reuse or disposal. Avoid

creating dusts or mists. To avoid foaming problems, do not use water to flush away spills. Dispose of waste properly (See Section XIII).

Contact CHEMTREC (800-424-9300) for technical advice and assistance relating to chemical emergencies involving this product.

Section VII: Handling and Storage

Handling: Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Use with adequate ventilation. Wash thoroughly after handling. Remove contaminated clothing and launder before reuse. Empty containers may contain residue, which is hazardous. Do not mix this product with any other chemical or cleaning agent. Forms alkaline solution with water that may cause eye and skin irritation.
Storage: Keep containers in a dry area and closed when not in use. Keep in sealed containers to avoid caking. Keep away from acids. Caution: Floors wetted with this material and water may be slippery. For institutional use only. Keep this and all chemicals out of reach of children.

Section VIII: Exposure Control/Personal Protection

Respiratory Protection: Not normally required in well-ventilated area**.** A NIOSH approved dust respirator may be permissible under certain circumstances where airborne concentrations of dust are expected to exceed exposure limits. Protection by air purifying respirators is limited. Use NIOSH approved self-contained apparatus made for emergencies or entry into unknown concentrations or immediately dangerous to life or health conditions. All personal respiratory protection equipment should be used in accordance with OSHA 29 CFR 1910.134.
Ventilation: Provide sufficient mechanical (general and/or local exhaust ventilation) to maintain dust concentrations below exposure limits.
Protective Gloves: Use chemical-resistant rubber gloves to prevent skin contact.
Eye Protection: Avoid eye contact. Chemical splash goggles are recommended whenever eye or face eye contact may occur. Provide an ANSI-approved eye wash station in the work area.
Other Protective Clothing or Equipment: Wear arm protectors and aprons, if necessary, to avoid contaminating regular clothing and shoes and to prevent skin contact.

Section IX: Physical/Chemical Properties

APPEARANCE: White granular free-flowing powder
ODOR: lemon odor
BOILING RANGE: Not established
VAPOR PRESSURE: Not established
SPECIFIC GRAVITY: > 1
VAPOR DENSITY (Air = 1): Not established
pH: 12.0 – 12.5 (1% Solution)
PERCENT VOLATILE BY VOLUME: < 1%

MELTING POINT: Not established, but product decomposes
EVAPORATION RATE: Not established
(N-BUTYL ACETATE =1)
VISCOSITY: Not established
SOLUBILITY IN WATER: > 30%

Section X: Reactivity Information

Stability: Product is stable. Avoid temperatures above 250° C that would cause decomposition of surfactant.
Incompatibility: The product is incompatible with strong oxidizers, acids, aluminum powder, fluorine, and molten lithium.
Hazardous Reaction/Decomposition or by Product: Contact with acids will release carbon dioxide and heat. Flammable hydrogen gas may be produced upon prolonged contact with tin, lead, zinc, and aluminum. When heated to decomposition, may emit toxic fumes such as carbon monoxide, carbon dioxide and oxides of sodium, phosphorous, and sulfur.
Hazardous Polymerization: Will not occur.

Section XI: Toxicological Information

Ingredients used in this product have the following toxicological data:

ANIMAL DATA: Sodium Sulfate
Ingestion: Low toxicity by ingestion. Oral-Mouse LD50: 5,989 mg/kg
Other: Oral-Mouse TDLo: 14 g/kg (female 8 – 12D post): Reproductive effects
This study indicates that lacating female rats were fed large doses of the substance 8 – 12 days following birth. Reproductive effects in the female rats offspring were noted. This study is not significant in identifying risks to humans in an industrial setting.

Sodium Carbonate
Contact: An eye and skin irritant.
Skin-Rabbit, adult 500 mg/24H – Mild irritation effects
Eye effects-Rabbit, adult 100 mg/24H – Moderate irritation effects
Eye effects-Rabbit, adult 100 mg, rinsed - Mild irritation effects
Ingestion: Low toxicity by ingestion. Oral-Rat LD50: 4,090 mg/kg
Inhalation: Inhalation-Rat LC50: 2,300 mg/m³/2 Hours
Inhalation-Mouse LC50: 1,200 mg/m³/2H
Inhalation-Guinea Pig, adult LC50: 800 mg/m³/2H
Moderately toxic by inhalation.

Sodium Metasilicate
Conatct: A caustic material which is a severe eye, skin, and mucous membrane irritant. Skin-Rabbit, adult 250 mg/24H – Severe irritation effects

Skin-Guinea Pig, adult 250 mg/24H - Moderate irritation effects
Ingestion: Harmful if ingested. Oral-Rat LD50: 1,153 mg/kg
Oral-Mouse LD50: 770 mg/kg
Oral-Dog, adult LDLo: 250 mg/kg
Oral-Pig LDLo: 250 mg/kg
Other: Oral-Rat TDLo: 15 g/kg (14W male/14W pre-3W post): Reproductive effects. Experimental reproductive effects in rats ingesting large doses. Chronic ingestion may cause kidney lesions at high doses.

Sodium Tripolyphosphate

Contact: Mild irritant to unwashed eyes; non-irritant to washed eyes of rabbits.
Ingestion: Low toxicity by ingestion. Oral-Rat LD50: 6,500 mg/kg
Oral-Mouse LD50: 3,210 mg/kg (Sax)
Inhalation: Rat LC50> 0.39 mg/L 4 Hours

Nonylphenol Ethoxylate

Contact: Skin and severe eye irritant.
Moderately toxic by skin contact.
Skin-Rabbit, adult 500mg open- Mild irritation effects
Eye effects-Rabbit, adult 5 mg- Severe irritation effects
Skin-Rabbit, adult LD50: 2,000 mg/kg
Skin-Rabbit LD50: 2 mL/kg
Ingestion: Oral-Rat LD50: 1,310 mg/kg
Moderately toxic by ingestion

Cellulose, Carboxymethyl Ether, Sodium Salt

Ingestion: Low toxicity by ingestion.
Oral-Rat LD50: 27,000 mg/kg
Oral-Guinea Pig, adult LD50: 16,000 mg/kg
Other: Oral-Rat LDLo: 140 g/kg (14D male): Reproductive effects. Experimental reproductive effects in male rats fed the chemical for 14 days prior to mating.

HUMAN DATA: Sodium Metasilicate
Contact: Skin-Human 250 mg/24H – Severe irritation effects

Section XII: Ecological Information

Ecotoxicological information:
Not available for product. A large spill might be detrimental to aquatic life and may be toxic to aquatic plants due to its alkalinity. Will cause foaming when discharged into surface water and sewer systems. Sodium carbonate is toxic to plants.
Aquatic toxicity data:
Sodium carbonate: 96 hour LC50, Bluegill sunfish: 300 – 320 mg/L, low toxicity.
96 hour LC50, Daphnia magna: 265 - 565 mg/L, low toxicity.

Sodium tripolyphosphate: 96 hour LC50, Rainbow trout, Inland silversides, and Mysid shrimp: >100 mg/L, non-toxic.
48 hour EC50, Daphnia magna: > 100 mg/L, non-toxic.
Product may be dangerous if it enters water intakes. Keep product out of water intakes and public sewer systems.

Chemical Fate Information:
No information available for product. Alkalinity of product will be neutralized if it mixes with large volumes of water. Phosphate compounds in soil and surface waters may be taken up by plants as essential nutrients and may cause eutrophication and algae blooms in surface waters.

Section XIII: Disposal Consideration

Waste Disposal: Any disposal must be in accordance with federal, state, and local regulations. Do not discharge product to storm sewers or waterways. Dilute (used) detergent solutions may typically be discharged to local wastewater treatment facilities. As with any wastewater, consultation with local treatment plant staff is recommended before disposal. Concentrated product should be recovered for reuse. The unused product is not expected to be a RCRA hazardous waste. Spills of concentrated product should be recovered for reuse.

Section XIV: Transport Information

DOT Proper Shipping Description: Corrosive solids, NOS, (Sodium Silicate), 8, UN1759, PG II
Dot Hazard Class / Division Label: Corrosive
Shipping Containers: 50-pound boxes

Section XV: Regulatory Information

OSHA Hazard Communication Standard: OSHA hazardous chemicals as defined under 29 CFR 1910.1200 are listed in Section II.
Toxic Substances Control Act (TSCA): The intentional ingredients of this product are listed.
SARA Title III: None
Section 302 Extremely Hazardous Substances: None
Section 311 /312 Hazard Categories: Immediate health hazard
Section 313 Toxic Chemicals: None present ≥ the minimum reportable concentrations.
Note: reporting is only applicable to manufacturers in SIC Codes 20 - 39
CERCLA Hazardous Substances: Sodium Tripolyphosphate, RQ= 5,000 pounds
2-Butoxyethanol (< 1%) = No RQ assigned to this class of glycol ethers.
North Carolina Water and Air Resources Act: This product complies with 143-214.4 of the North Carolina Water and Air Resources Act.

Section XVI: Other Information

This product is for institutional use only and is not for resale.