MATERIAL SAFETY DATA SHEET

CFR SANITIZER

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: CFR Sanitizer
Product Description: Sodium Hypochlorite solution 12.5%
SDS Number: 320222-08
Recommended use: Bleaching agent; water treatment; disinfectant; detergent; cleaning agent.

MANUFACTURER:
Manufacturer/Importer/Supplier/Distributor information

Company name	Chemical Products & Systems, Inc.
Address	124 W South Street Jackson, Ms. 39201 United States

Emergency Phone Number
24-hour contact:
Chemtrec (800) 424-9300

2. Hazard(s) identification

Physical hazards	Not classified.	
Health hazards	Skin corrosion/irritation	Category 1
	Serious eye damage/eye irritation	Category 1
Environmental hazards	Hazardous to the aquatic environment, acute Hazard.	Category 1
	Hazardous to the aquatic environment, long-term hazard.	Category 1
OSHA defined hazards	Not classified.	

Label elements

Signal word	Danger
Hazard statement	Causes severe skin burns and eye damage. Causes serious eye damage. Very toxic to aquatic life with long lasting effects.

Precautionary statement

Prevention	Do not breathe mist or vapors. Avoid release to the environment. Wear eye protection/face protection. Wear protective impervious gloves, protective clothing, eye protection/face protection.
Response	If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Wash contaminated clothing before reuse.
Storage	Store away from incompatible materials. Store in a well-ventilated place. Keep container tightly closed. Store locked up. Store in accordance with local, regional, national, and international regulations.
Disposal	Dispose of contents and container in accordance with local, regional, Hazard(s) not otherwise classified (HNOC)national, and international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	22.4% of the mixture consists of component(s) of unknown acute dermal toxicity. 12.5% of the mixture consists of component(s) of unknown acute inhalation toxicity. 9.9% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 9.9% of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures

Chemical name	**Common name and synonyms**	**CAS number**	**%**
Water		7732-18-5	75 – 80
Sodium Hypochlorite		7681-52-9	11.9 - 15.6
Sodium Hydroxide		1310-73-2	0.1 – 2
Sodium Chloride		7647-14-5	≤ 12.5

4. FIRST AID MEASURES

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Most Important	Burning pain and severe corrosive skin damage. Causes serious eye damage.

Symptoms/effects Acute and delayed.	Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Chemical burns Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.
General information	Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

5. FIRE FIGHTING MEASURES

Suitable extinguishing media	Foam. Powder. Carbon dioxide (CO2).
Unsuitable extinguishing Media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Firefighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.
Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind appropriate protective equipment and clothing during clean-up. Do not breathe mist/vapors. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Absorb/clean with appropriate and compatible material. Stop flow of of material if without risk. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist/vapors. Do not touch damaged containers or spilled material unless wearing appropriate protective

clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Absorb/clean with appropriate and compatible material. Stop flow of material if without risk. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid release to the environment. Inform appropriate managerial or Supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. HANDLING AND STORAGE

Precautions for safe handling

Do not breathe mist or vapors. Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store locked up. Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Sodium Hydroxide (CAS 1310-73-2)	PEL	2 mg/m3

US. ACGIH Threshold Limit Values

Components	Type	Value
Sodium Hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m3

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Sodium Hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m3

US. Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value
Sodium Hypochlorite (CAS 7681-52-9)	STEL	2 mg/m3

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering Controls

Not available.

Individual protection measures, such as personal protective equipment

General	It is recommended that users of this product perform a risk assessment to determine the appropriate PPE.
Eye/face protection	Do not get in eyes. Wear chemical goggles and face shield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.
Skin Protection Hand protection	Wear appropriate chemical resistant, impervious gloves. Wear protective gloves. For prolonged or repeated skin contact use suitable protective and impervious gloves.
Other	Wear appropriate chemical resistant clothing.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene Considerations	Always observe good personal hygiene measures, such as washing after and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear.
Physical state	Liquid.
Form	Liquid.
Color	Clear to pale yellow.
Odor	Chlorine.
Odor threshold	Not available.
pH	12 - 14 (1% in DI Water)
Melting point/freezing point	4 - 3 °F (-20 - -16.11 °C)
Initial boiling point and boiling range	> 230 °F (> 110 °C)
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit – lower (%)	Not available.
Flammability limit – upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	12 mm Hg @ 20°C
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility	(water) Soluble.
Partition coefficient (n-octanol/water)	Not available.

Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
Specific gravity	1.209 @ 20°C

10. STABILITY AND REACTIVITY

Reactivity Reacts	violently with strong acids. This product may react with oxidizing agents.
Chemical stability	Material is stable under normal conditions**.**
Possibility of hazardous Reactions	Reacts violently with strong acids. This product may react with oxidizing agents. Hazardous polymerization does not occur.
Conditions to avoid	Contact with incompatible materials. Do not mix with other chemicals.
Incompatible materials	Strong acids. Bases, alkalis (organic). Oxidizing agents.
Hazardous decomposition products	Chlorine. Hydrogen chloride.

11. TOXOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation	May cause irritation to the respiratory system. Prolonged inhalation may be harmful.
Skin contact	Causes severe skin burns.
Eye contact	Causes serious eye damage.
Ingestion	Causes digestive tract burns.
Symptoms related to the physical, chemical and toxicological characteristics	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

Information on toxicological effects

Acute toxicity Not known.

Components	**Species**	**Test Results**
Sodium Chloride (CAS 7647-14-5)		
Acute		
Oral		
LD 50	Rat	3000 mg/kg
Components	**Species**	**Test Results**
Sodium Hydroxide (CAS 1310-73-2)		
Acute		
Dermal		
LD 50	Rat	1350 mg/kg
Oral		
	Rat	140 - 340 mg/kg
Sodium Hypochlorite (CAS 7681-52-9)		
Acute		
Oral		
	Rat	8.91 g/kg

Skin corrosion/irritation	Causes severe skin burns and eye damage.
Serious eye damage/eye irritation	Causes serious eye damage.
Respiratory or skin sensitization	
Respiratory sensitization	Due to partial or complete lack of data the classification is not possible.
Skin sensitization	Due to partial or complete lack of data the classification is not possible.
Germ cell mutagenicity	Due to partial or complete lack of data the classification is not possible.
Carcinogenicity	Due to partial or complete lack of data the classification is not possible.

IARC Monographs. Overall Evaluation of Carcinogenicity

Sodium Hypochlorite (CAS 7681-52-9) 3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity	Due to partial or complete lack of data the classification is not possible.
Specific target organ toxicity - single exposure	Due to partial or complete lack of data the classification is not possible.
Specific target organ toxicity - repeated exposure	Due to partial or complete lack of data the classification is not possible.
Aspiration hazard	Due to partial or complete lack of data the classification is not possible.
Chronic effects	Prolonged inhalation may be harmful.

12. ECOLOGICAL INFORMATION

Ecotoxicity Very toxic to aquatic life with long lasting effects.

Product		**Species**	**Test Results**
Sodium Hypochlorite 12.5%			
	EC50		40 mg/l, 96 hours Nittocra Spinipes Fasciatus 4 mg/l, 96 hours Gammarus Fasciatus
Aquatic			
Crustacea	EC50		Daphnia 2519.1724 mg/l, 48 hours estimated 0.07 - 0.7 mg/l, 24 hours magnia 0.006 mg/l, 24 hours Ceriodaphina sp.
Fish	LC50	Fish	12.5131 mg/l, 96 hours estimated

Components		**Species**	**Test Results**
Sodium Chloride (CAS 7647-14-5)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	340.7 - 469.2 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	6020 - 7070 mg/l, 96 hours

Components		**Species**	**Test Results**
Sodium Hydroxide (CAS 1310-73-2)			
Aquatic			
Crustacea	EC50	Water flea (Ceriodaphnia dubia)	34.59 - 47.13 mg/l, 48 hours
	LC50	Common shrimp, sand shrimp (Crangon Cragnon	33 - 100 mg/l, 48 hours
Fish	LC50	Bony fish superclass (Osteichthyes)	33 - 100 mg/l, 48 hours
		Western mosquitofish (Gambusia affinis)	125 mg/l, 96 hours

Sodium Hypochlorite (CAS 7681-52-9)

Aquatic

Fish	LC50	Chinook salmon (Oncorhynchus tshawytscha)	0.038 - 0.065 mg/l, 96 hours

Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	No data available.
Mobility in soil	No data available.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. DISPOSAL CONSIDERATIONS

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Incinerate the material under controlled conditions in an approved incinerator. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Waste from residues / unused Products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. TRANSPORTATION INFORMATION

DOT

UN number	UN1791
UN proper shipping name	Hypochlorite solutions (Sodium Hypochlorite), MARINE POLLUTANT
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Label(s)	8
Packing group	III
Environmental hazards	
Marine pollutant	Yes
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	IB3, N34, T4, TP2, TP24
Packaging exceptions	154
Packaging non bulk	203
Packaging bulk	241

Reportable Quantity for Sodium Hypochlorite = 100 lbs.
Not a Marine Pollutant by DOT in containers of 119 gallons or less.

IATA

UN number	UN1791

UN proper shipping name	Hypochlorite solution (Sodium Hypochlorite)
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Labels	8
Packing group	III
Environmental hazards	Yes
ERG Code	8L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo Aircraft	Allowed with restrictions.
Cargo aircraft only	Allowed with restrictions.

IMDG

UN number	UN1791
UN proper shipping name	Hypochlorite solution (Sodium Hypochlorite), MARINE POLLUTANT
Transport hazard class(es)	
Class	8
Subsidiary risk	–
Label(s)	8
Packing group	III
Environmental hazards	
Marine pollutant	Yes
EmS	Not available.
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not established.

DOT

IATA; IMDG

Marine pollutant

General information IMDG Regulated Marine Pollutant.

15. REGULATORY INFORMATION

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Toxic Substances Control Act (TSCA) All components of the mixture on the TSCA 8(b) inventory are designated “active”.

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

CERCLA Hazardous Substance List (40 CFR 302.4)

Sodium Hydroxide (CAS 1310-73-2)	Listed.
Sodium Hypochlorite (CAS 7681-52-9)	Listed.

SARA 304 Emergency release notification Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053) Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance Not listed.

SARA 311/312 Hazardous chemical Yes

Classified hazard Skin corrosion or irritation

Categories Serious eye damage or eye irritation

SARA 313 (TRI reporting) Not regulated.

US state regulations

California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to www.P65Warnings.ca.gov.

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Sodium Hydroxide (CAS 1310-73-2)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes

Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) 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

Revision date 11-02-2021

HMIS® ratings
Health: 3
Flammability: 0
Physical hazard: 1

NFPA ratings
Health: 3
Flammability: 0
Instability: 1

Disclaimer The information provided in this Safety Data Sheet has been obtained from sources believed to be reliable. Chemical Products & Systems Inc., provides no warranties, either expressed or implied and assumes no responsibility for the accuracy or completeness of the data contained herein. This information is offered for your information, consideration, and investigation. You should satisfy yourself that you have all current data relevant to your particular use. Chemical Products & Systems, Inc., knows of no medical condition, other than those noted on this Safety Data Sheet, which are generally recognized as being aggravated by exposure to this product.