SAFETY DATA SHEET

Issue Date 25-Mar-2015 **Revision Date** 08-Feb-2023 **Version** 6

1. Identification

Product Name REG 13

Other means of identification Product
Code 221
UN/ID No. UN1791
Synonyms None
Registration Number(s) 15-150

Recommended use of the chemical and restrictions on use
Recommended Use Uses Liquid Chlorinated Sanitizer. No
advised against information available

Manufacturer Address
Anderson Chemical Company, 325 South Davis Avenue, Litchfield, MN 55355 (320-693-2477)

Emergency telephone number
Chemtrec 1-800-424-9300

2. Hazard(s) identification

Classification
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin corrosion/irritation	Category 1 Sub-category B
Serious eye damage/eye irritation	Category 1
Specific target organ toxicity (single exposure)	Category 3
Corrosive to metals	Category 1

Hazards not otherwise classified (HNOC)
Not applicable

Label elements
Signal word: Danger

Hazard statements:
Causes severe skin burns and eye damage
May cause respiratory irritation
May be corrosive to metals

Precautionary Statements - Prevention:
Do not breathe dusts or mists
Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection
Use only outdoors or in a well-ventilated area
Keep only in original container

Precautionary Statements - Response:
Immediately call a POISON CENTER or doctor
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Immediately call a POISON CENTER or doctor
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower
Wash contaminated clothing before reuse
IF INHALED: Remove person to fresh air and keep comfortable for breathing
Immediately call a POISON CENTER or doctor
IF SWALLOWED: Rinse mouth. DO NOT induce vomiting
Absorb spillage to prevent material damage

Precautionary Statements - Storage:
Store locked up
Store in a well-ventilated place. Keep container tightly closed
Store in corrosion resistant container with a resistant inner liner

Precautionary Statements - Disposal:
Dispose of contents/container to an approved waste disposal plant

Unknown Acute toxicity: Not applicable

Other Information
Not applicable

3. Composition/information on ingredients

Chemical name	CAS No	Weight-%
Sodium hypochlorite	7681-52-9	12.5

Any concentration shown as a range is due to batch variation or the exact percentage has been withheld as a trade secret.

4. First-aid measures

Description of first aid measures

General advice Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

Inhalation Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get immediate medical advice/attention. May cause asthma-like (reactive airways) symptoms.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get immediate medical advice/attention. Do not attempt to neutralize with chemical agents. Oils and ointments should not be used at this time.

Skin contact Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get immediate medical advice/attention. Irritation may follow an initial latency which may vary by hours for dilute solutions to minutes for more concentrated solutions. If skin feels slippery, the product may be still present in sufficient quantities to cause rash or burn. Continue washing skin until slick feeling is gone. Discard footwear that cannot be decontaminated and any leather articles.

Ingestion Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Get immediate medical advice/attention. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Damage may appear days after exposure. Do not attempt to neutralize.

Self-protection of the first aider Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8). Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.

Most important symptoms and effects, both acute and delayed

Symptoms Redness. Burning. May cause blindness. Coughing and/ or wheezing.

Indication of any immediate medical attention and special treatment needed

Note to physicians Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure.

5. Fire-fighting measures

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Large Fire CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

Specific hazards arising from the chemical The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors. Containers may explode when heated. Cool containers with flooding quantities of water until well after fire is out. Do not allow run-off from fire-fighting to enter drains or water courses.

Hazardous combustion products Sodium oxides. Hydrogen chloride (HCl). Disodium oxide. Chlorine. On decomposition product releases oxygen which may intensify fire.

Explosion Data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

Special protective equipment for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment. In the event of fire and/or explosion do not breathe fumes. Overexposure to toxic decomposition products may cause a health hazard.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Corrosive material. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Other information Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so. Suppress vapors with water spray. Keep out of drains, sewers, ditches and waterways.

Methods for cleaning up Dike far ahead of liquid spill for later disposal. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Flush area with flooding quantities of water. Do not attempt to neutralize or mix with other cleaning agents. Clean contaminated surface thoroughly.

7. Handling and storage

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. When diluting, always add the product to water. Never add water to the product.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture. Store locked up. Keep out of the reach of children. Store away from other materials. Do not freeze. Do not contaminate food or feed stuffs. FROM EPA LABEL: STORAGE AND DISPOSAL: Do not contaminate water, food or feed by storage, disposal or cleaning of equipment. REG 13 STORAGE: Store this product in a cool dry area, away from direct sunlight and heat to avoid deterioration. In case of spill, flood areas with large quantities of water. Product or rinsates that cannot be used should be dluted with water before disposal in a sanitary sewer, in accordance with state & local regulations.

Incompatible Materials Oxidizing agent. Acids. Bases. Amines. Reducing agent. Metals. Ammonia. Organic material. Cleaner, detergents/soaps. Peroxides.

8. Exposure controls/personal protection

Control parameters

Exposure Limits The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Exposure Guidelines Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Appropriate engineering controls

Engineering controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Face protection shield. Tight sealing safety goggles.

Hand protection Wear suitable gloves. Impervious gloves.

Skin and body protection Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron. Product can react with various fabrics usually increasing with concentrations. Reactions vary significantly depending on strength of chemical, material, fabric treatment and dye color.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Environmental exposure controls Do not allow into any sewer, on the ground or into any body of water. Local authorities should be advised if significant spillages cannot be contained.

General hygiene considerations Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Wash hands before breaks and immediately after handling the product.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical State:	Liquid
Appearance:	Aqueous solution
Color:	Yellow
Odor:	Pungent Chlorine
Odor Threshold:	No information available
pH:	No information available
Salt Out Point:	No information available
Melting Point/Freezing Point:	-29 °C / -20 °F
Boiling Point/Boiling Range:	No information available
Flash Point:	No information available
Evaporation Rate (BuAc=1):	No information available
Flammability (solid, gas):	No information available
Flammability Limits in Air:	No information available
Vapor Pressure (mm Hg):	No information available
Vapor density (Air =1):	No information available
Specific Gravity (H_2O=1):	No information available
Water Solubility:	100% Complete
Solubility(ies):	No information available
Partition Coefficient (n-octanol/water):	No information available
Autoignition Temperature:	No information available
Decomposition Temperature:	No information available
Kinematic Viscosity:	No information available
Dynamic Viscosity:	No information available

Other information

Explosive properties	No information available
Oxidizing properties	No information available
Molecular Weight:	74.45

10. Stability and reactivity

Reactivity Contact with most metals will generate flammable hydrogen gas. Contact with acids liberates toxic gas. May react with oxidizing agents. Violent reactions may occur with some organic compounds. Reacts readily with various reducing sugars to produce carbon monoxide.

Chemical stability Slowly decomposes on contact with air. Rate increases with the concentration and temperature. Sodium hypochlorite becomes less toxic with age.

Possibility of hazardous reactions Contact with water generates heat. Heating causes rise in pressure with risk of bursting. Reacts with acids by giving off heat. Hazardous gases may be generated from contact with acids, ammonium hydroxide (aqua ammonia) or cleaners containing ammonia compounds. Contact with acids, halogenated organics, organic nitro compounds, glycols, or sodium tetrahydroborate may produce flammable gas. Contact with 1,2-dichloroethylene, trichloroethylene, tetrachloroethane or phosphorous can form spontaneously flammable chemicals.

Conditions to avoid Exposure to air or moisture over prolonged periods. Extremes of temperature and direct sunlight.

Incompatible Materials Oxidizing agent. Acids. Bases. Amines. Reducing agent. Metals. Ammonia. Organic material. Cleaner, detergents/soaps. Peroxides.

Hazardous decomposition products Thermal decomposition can lead to release of irritating and toxic gases and vapors. Sodium oxides. Hydrogen chloride (HCl). Oxygen. Disodium oxides. Chlorine.

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation Specific test data for the substance or mixture is not available. Corrosive by inhalation. (based on components). Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal.

Eye contact Specific test data for the substance or mixture is not available. Causes burns. (based on components). Corrosive to the eyes and may cause severe damage including blindness. Causes serious eye damage. May cause irreversible damage to eyes.

Skin contact Specific test data for the substance or mixture is not available. Causes severe burns.

Ingestion Specific test data for the substance or mixture is not available. Causes burns. (based on components). Ingestion causes burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Redness. Burning. May cause blindness. Coughing and/ or wheezing.

Numerical measures of toxicity

Acute Toxicity:

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 14,954.70 mg/kg

ATEmix (dermal) 43,521.70 mg/kg

Component Information

Chemical name	Oral LD_{50} :	Dermal LD_{50} :	LC_{50} (Lethal Concentration):
Sodium hypochlorite 7681-52-9	= 8.91 g/kg (Rat)	> 20000 mg/kg (Rabbit)	> 10.5 mg/L (Rat) 1 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Causes severe burns.

Serious eye damage/eye irritation Classification based on data available for ingredients. Causes burns. Risk of serious damage to eyes.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity See section 2 for classified hazards based on component information.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Sodium hypochlorite 7681-52-9	-	Group 3	-	-

IARC (International Agency for Research on Cancer)
Group 3 - Not Classifiable as to Carcinogenicity in Humans

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

Other Adverse Effects: No information available.

12. Ecological information

Ecotoxicity The environmental impact of this product has not been fully investigated.

Chemical name	Toxicity to algae	Toxicity to fish	Toxicity to microorganisms	Toxicity to daphnia and other aquatic invertebrates
Sodium hypochlorite 7681-52-9	-	0.06 - 0.11 mg/L (LC50 96 h flow-through - Pimephales promelas) 4.5 - 7.6 mg/L (LC50 96 h static - Pimephales promelas) 0.4 - 0.8 mg/L (LC50 96 h static - Lepomis macrochirus) 0.28 - 1 mg/L (LC50 96 h flow-through - Lepomis macrochirus) 0.05 - 0.771 mg/L (LC50 96 h flow-through - Oncorhynchus mykiss) 0.03 - 0.19 mg/L (LC50 96 h semi-static - Oncorhynchus mykiss) 0.18 - 0.22 mg/L (LC50 96 h static - Oncorhynchus mykiss)	-	0.033 - 0.044 mg/L (EC50 48 h Static - Daphnia magna)

Persistence and Degradability: No information available.

Bioaccumulation: There is no data for this product.

Mobility: No information available.

Other Adverse Effects: No information available.

13. Disposal considerations

Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local, state, and national regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

US EPA Waste Number (product as supplied) D002.

Disposal of wastes STORAGE AND DISPOSAL: Do not contaminate water, food or feed by storage, disposal or cleaning of equipment. REG 13 DISPOSAL: To avoid wastes, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often such programs are run by state or local governments or by industry). CONTAINER HANDLING: NONREFILLABLE CONTAINER-DO NOT reuse or refill this container. Clean container promptly after emptying. To clean container: fill container ¼ full with water. Replace the closure or plug the opening of the container. Rotate the container, making sure to rinse all surface. Turn the container upside down. Add the rinsate to the application equipment or mix tank or store rinsate for later use of disposal. Allow 30 seconds for rinsate to drain. Repeat this procedure two more times. Offer container for recycling if available or dispose of in a sanitary landfill, or by other procedure allowed by state & local authorities. CONTAINER HANDLING: REFILLABLE CONTAINER-Refill this container with REG 13 only. Do not reuse this container for any other purpose. Clean container promptly after emptying. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean container: fill container ¼ full with water. Replace the closure or plug the opening of the container. Rotate the container, making sure to rinse all surface. Turn the container upside down. Add the rinsate to the application equipment or mix tank or store rinsate for later use of disposal. Allow 30 seconds for rinsate to drain. Repeat this procedure two more times. Offer container for recycling if available or dispose of in a sanitary landfill, or by other procedure allowed by state & local authorities.

14. Transport information

DOT

UN/ID No UN1791
Proper shipping name HYPOCHLORITE SOLUTIONS (SODIUM HYPOCHLORITE)
Hazard Class 8
Packing Group III

15. Regulatory information

International Inventories

Chemical name	TSCA	AICS	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS
Sodium hypochlorite 7681-52-9	Present ACTIVE	Present	Present	-	Present	-	Present	Present	Present	Present

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
AICS - Australian Inventory of Chemical Substances
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances

US 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
Skin corrosion/irritation
Serious eye damage/eye irritation
Specific target organ toxicity (single exposure)
Corrosive to metals

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	SARA Extremely Hazardous Substances TPQ
Sodium hypochlorite 7681-52-9	100 lb	-	

Clean Water Act (CWA)
This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sodium hypochlorite 7681-52-9	100 lb	-	-	X

OSHA - Process Safety Management - Highly Hazardous Chemicals
This product does not contain any substances regulated under Process Safety Management (29 CFR 1910.119).

Department of Homeland Security - Chemical Facility Anti-Terrorism Standards (CFATS)
This product does not contain any substances regulated under the Chemical Facility Anti-Terrorism Standards (6 CFR 27).

EPA Statement

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label: Precautionary Statements HAZARDS TO HUMANS AND DOMESTIC ANIMALS DANGER: Corrosive, may cause severe skin and eye irritation or chemical burns to broken skin. Causes eye damage. Do not get in eyes, on skin or clothing. Wear safety glasses or goggles and rubber gloves when handling this product. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse. Avoid breathing vapors. Vacate poorly ventilated areas as soon as possible. Do not return until odors have dissipated. Physical or Chemical Hazards Strong oxidizing agent: Mix only with water according to label directions. Mixing this product with chemicals (e.g. ammonia, acids, detergents, etc.) or organic chemicals (e.g. urine, feces, etc.) will release chlorine gas irritating to eyes, lungs, and mucous membranes. Environmental Hazards This product is toxic to fish and aquatic organisms. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

Maximum Use (mg/L unless otherwise indicated): 37 mg/l

16. Other information

NFPA	**Health hazards** 3	**Flammability** 0	**Instability** 1	**Physical and Chemical Properties** OX
HMIS	**Health hazards** 3	**Flammability** 0	**Physical hazards** 1	**Personal protection** X

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No information available

Disclaimer

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet