OSHA GHS
SAFETY DATA SHEET

1. IDENTIFICATION

Product identifier: **Well Optimizer- g (Optimizer- 425 is pellet version)**

Recommended use: Specialty industrial applications

Restrictions on use: None known

Supplier: **THE FUTUREWELL GROUP, INC**
7800 INTERSTATE 10 E #612
SAN ANTONIO TX 78219-4800
1 512-661-6730

Emergency phone number: +1 800-535-5053 (Infotrac)

2. HAZARD(S) IDENTIFICATION

Classification:

Physical	Health
Not Classified	Acute Oral Toxicity Category 4 Acute Inhalation Toxicity Category 3 Skin Corrosion Category 1B Eye Damage Category 1

OSHA/GHS Labeling:
DANGER

Hazard statement(s)
Harmful if swallowed.
Toxic if inhaled
Causes severe skin burns and eye damage.

Prevention
Do not breathe dust.
Wash thoroughly after handling.
Use only outdoors or in a well-ventilated area
Do not eat, drink or smoke when using this product.
Wear protective gloves, protective clothing, eye protection and face protection

Disposal
Dispose of contents and container in accordance with local and national regulations.

Response
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with soap and water. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or doctor.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. 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.

Storage:
Keep container tightly closed. Store locked up.

Hazards not Otherwise Classified: Damp or wet material may generate nitrogen trichloride, an explosion hazard, and/or other hazardous and toxic gases. Heating to over 176ºF (80ºC) can initiate a self-sustaining

decomposition which releases large amounts of heat and gas including toxic gases and vapors. Contact with acids releases toxic gas.

Other Hazards: According to the NFPA Hazardous Materials Code (400), this material is a Class 1 oxidizer. Class 1 oxidizers are materials that do not moderately increase or cause or cause a slight increase in the burning rate of the combustible materials with which they come into contact. NFPA Class 1 oxidizers generally do not meet the criteria for classification as an oxidizer under the GHS or transport regulations

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical name	CAS No	Concentration
Well Optimizer Blend	Proprietary	>50%
Sodium acid acetate	Proprietary	<20
Carbonic acid disodium salt	497-19-8 / 207-838-8	<20
Sodium Sulfate	7757-82-6 / 231-820-9	<10
Sodium Chloride	7647-14-5 / 231-598-3	<5

The specific chemical identity and exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST-AID MEASURES

Inhalation: If symptoms of exposure develop, remove to fresh air. If breathing becomes difficult, administer oxygen. If breathing has stopped, administer artificial respiration. Get immediate medical attention.

Skin Contact: Wash thoroughly with water for 15 minutes. Seek immediate medical attention.

Eye Contact: Rinse cautiously with water for 20 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek immediate medical attention.

Ingestion: Do NOT induce vomiting. If the victim is fully conscious, have them rinse mouth with water. Seek immediate medical attention. Never give anything by mouth to a person who is unconscious or drowsy.

Most Important symptoms and effects, both acute and delayed: Toxic if inhaled. Inhalation of dust may cause irritation of upper and lower airways, coughing, laryngospasm and edema, shortness of breath, bronchoconstriction, and possible pulmonary edema. The pulmonary edema may develop several hours after a severe acute exposure. Dermal exposures along with moisture may cause redness, irritation, burning sensation, swelling, blister formation, first, second, or third degree burns. Repeated and prolonged skin contact may cause a dermatitis. Causes serious eye damage. Exposure to eyes may cause irritation and burns to the eye lids, conjunctivitis, corneal edema, and corneal burn. Significant and prolonged contact may cause damage to the internal contents of the eye. Harmful if swallowed. Exposure by ingestion may cause irritation, nausea, and vomiting. May cause local tissue damage to esophagus and stomach such as burning, inflammation, local ulceration, and may cause gastrointestinal bleeding.

Indication of any immediate medical attention and special treatment needed: Immediate medical attention is required for all routes of exposure.

Note to physician: Treat as a corrosive substance. This material is more irritating to the skin and eyes in the presence of water. For prolonged exposures and significant exposures, consider delayed injury to exposed tissues. There is no antidote. Cyanuric acid is readily removed from the body via the renal system and is not bio-accumulated. Treatment is supportive care. Follow normal parameters for airway, breathing, and circulation.

5. FIRE-FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media: Flood with copious amounts of water. Do not use ABC fire extinguishers. Do not use dry chemicals, carbon dioxide, or halogenated extinguishing agents.

Specific hazards arising from the chemical: If heated by outside source to temperatures above 240 ºC (464ºF), this product will undergo decomposition with the evolution of noxious gases but no visible flame. When ignited will burn with the evolution of chlorine and equally toxic gases. Contaminated or wet product may act an oxidizer and intensify fire potential. Wet material may generate nitrogen trichloride, an explosion hazard. According to the NFPA Hazardous Materials Code (400), this material is a Class 1 oxidizer. Class 1 oxidizers are materials that do not moderately increase or cause or cause a slight increase in the burning rate of the combustible materials with which they come into contact.

Material which appears undamaged except for being damp on the outside, should be opened and inspected immediately. Use extreme caution when inspecting damaged packaging as damp or wet material may generate nitrogen trichloride, an explosion hazard and/or other hazardous and toxic gases.

Special protective equipment and precautions for fire-fighters: Move container from fire area if it can be done without risk.. Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for fires in areas where chemicals are used or stored.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures: Isolate the area and keep unnecessary personnel away. Stay upwind and keep out of low areas. Wear appropriate protective clothing and equipment (see section 8). Prevent contact with skin, eyes and clothing. Do not breathe dust or gas.

Environmental precautions: Prevent entry in storm sewers and waterways. Report spill as required by local and national regulations. This product is very toxic to aquatic organisms with long lasting effects.

Methods and materials for containment and cleaning up: Contain spilled material. Clean up spilled material as soon as possible to prevent contamination. DO NOT add water to spilled material. DO NOT use floor sweeping compounds to clean up spills. This could result in a fire. KEEP SPILLED MATERIAL DRY. Using clean, dedicated equipment, sweep and scoop spilled material into clean, dry containers for disposal. Complete cleanup on a dry basis if possible. Every attempt should be made to avoid mixing spilled material with other chemicals or debris when cleaning up.

DO NOT attempt to reseal contaminated drums. DO NOT transport wet or damp material. Damp material should be neutralized to a non-oxidizing state carefully following the instructions provided by the manufacturer. Contact manufacturer for instructions for handling and disposal of damp material.

7. HANDLING AND STORAGE

Precautions for safe handling: Prevent eye and skin contact. Do not breath dust or gas. Avoid creation of dust. Wash exposed skin thoroughly with soap and water after use. Wear appropriate protective clothing and equipment (see section 8). Do not eat, drink, or smoke when using this product. Use only in a well-ventilated area.

NEVER add water to this product. Always add product to large quantities of water. Use clean, dry utensils. Do not add the product to any dispensing device containing residuals of other products. Read and follow product use instructions. Take all precautions to avoid mixing with combustible or incompatible materials. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Due to

thermal decomposition properties, friction-producing equipment, such as screw conveyors or items with internal bearings, should be avoided whenever possible.

Do not reuse empty containers. Empty containers retain product residue and may be dangerous. Follow all SDS guidelines when handling empty containers.

Conditions for safe storage, including any incompatibilities: Store and handle in accordance with all current regulations and standards. (NFPA Oxidizer Class 1). Store in original container and in a dry area where temperatures do not exceed 52 ºC (125 ºF) for 24 hours. Keep container tightly closed. Do not allow water to get in container. If liner is present, tie after each use. Keep container tightly closed and properly labeled. Store locked up, away from incompatible materials.

Incompatible Substances: This product is a highly reactive oxidizing and chlorinating agent. Precautions should be taken to prevent the mixing of this product with other incompatible chemicals during storage, handling and manufacture. Some chemicals incompatible include (but are not limited to): Strong acids or bases; Amino Compounds (amines; amides; ammonia, and ammonium salts) and hydrazines; Acetic acid and acetic anhydride; Alcohols (methyl, ethyl, isopropyl, etc.) and phenols; Alkenes and acetylene; Biuret; Calcium hypochlorite; Ethers; Fungicides; Glycerin; Mineral reducing agents (sulfides, bisulfites, thiosulfates, nitrites, cyanide salts, etc.); Oils and paints; Organic or mineral oxidizers (peroxides, perborates, percarbonates); Petroleum products (gasoline, kerosene, etc.); Urea. Substances not listed must be evaluated for compatibility prior to use.: acids, ammonia, bases, floor sweeping compounds, calcium hypochlorite, reducing agents, and organic solvents and compounds.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure guidelines:

Well Optimizer Blend	None Established
Sodium acid acetate	None Established
Carbonic acid disodium salt	None Established
Sodium Sulfate	None Established
Sodium Chloride	None Established
Sodium acid acetate	None Established

Note: chlorine and chlorine compounds may be found in low concentrations in the head-space of containers.

Appropriate Engineering Controls: Use only in well-ventilated areas. Provide local exhaust ventilation where dust may be generated. Any dust collection equipment used for this product must not be used to collect dust from other material that will react with this material. All equipment should be thoroughly cleaned before and after use to prevent possible contamination and fire.

Respiratory Protection: Wear an approved particulate respirator with appropriate eye protection. A full face piece respirator provides both eye and respiratory protection. Selection of respiratory protection depends on the contaminant type, form and concentration. Select in accordance with all applicable regulations and good Industrial Hygiene practice.

Hand Protection: Wear appropriate chemical resistant gloves; butyl rubber, natural rubber, neoprene, nitrile or PVC. Consult a glove manufacturer for assistance in selection of gloves.

Skin Protection: Wear protective clothing to minimize skin contact. When potential for contact with material exists, wear disposable coveralls suitable for dust exposure. Contaminated clothing should be removed and laundered before reuse.

Eye Protection: Wear chemical safety goggles and face shield.

Other: Provide an emergency eyewash and shower in the immediate work area.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	White, Compact solid and granular particles
Odor:	Slight chlorine
Odor Threshold:	Not determined
pH:	6.7 (When 1.72 grams is dissolved in 1 gallons of water)
Melting/Freezing Point:	Not applicable
Boiling Point:	Not applicable
Flash Point:	Not applicable
Evaporation Rate: (n- butylacetate =1)	Not applicable
% Volatile by Volume:	Not applicable
Lower Flammability Limit: **Upper Flammability Limit:**	Not applicable
Vapor Pressure:	Not applicable
Vapor Density(Air=1):	Not applicable
Solubility:	Soluble in water
Autoignition Temperature:	Not determined
Decomposition Temperature:	225-250°C (437-482°F)
Viscosity:	Not applicable
Explosive Properties:	Wet material may generate nitrogen trichloride, an explosion hazard.
Oxidizing Properties:	Oxidizing Solid
Specific Gravity (H_2O= 1):	1.59

10. STABILITY AND REACTIVITY

Reactivity: Not reactive under normal temperatures and pressures.

Chemical Stability: Stable at normal temperatures and pressures.

Possibility of Hazardous Reactions: Reacts with water – see below. Oxidizer – contact with flammable or combustible materials may cause fire. Reaction with ammonia gas or solutions will generate explosive nitrogen trichloride. Hydrogen peroxide may react violently with liberation of oxygen. Oil and greases may cause decomposition of this product releasing chlorine and other toxic gases.

Conditions to Avoid: Incompatible materials and excessive heat. Wet material may generate nitrogen trichloride, an explosion hazard. Nitrogen trichloride (NCl3) can appear as a yellow, oily liquid or vapor. Any quantity of NCl3 is potentially explosive. Liquid NCl3 will explode in contact with certain organic impurities, when melting after having been frozen, from impact or supersonic vibration, or on heating to 60°C or above. Vapor NCl3 can be exploded or decomposed (to N2 and Cl2) when concentrations in air are as low as 0.3%. At this low concentration, however, the propagation rate is extremely slow, on the order of several minutes per foot. At concentrations of 3-4%, the detonation is explosive with an instantaneous pressure rise. There are no good data on what temperature or conditions are required to explode the gas. It is known that NCl3 vapor (or vapor-air mixture) can be exploded by a spark or by temperature in excess of 100°C.

Incompatible Materials: Do not get water inside container. Wet material may generate nitrogen trichloride, an explosion hazard. Avoid contact with easily oxidizable organic material. Some chemicals incompatible with ACLs include (but are not limited to): Strong acids or bases; Amino Compounds (amines; amides; ammonia, and ammonium salts) and hydrazines; Acetic acid and acetic anhydride; Alcohols (methyl, ethyl, isopropyl, etc.) and phenols; Alkenes and acetylene; Biuret; Calcium hypochlorite; Ethers; Fungicides; Glycerin; Mineral reducing agents (sulfides, bisulfites, thiosulfates, nitrites, cyanide salts, etc.); Oils and paints; Organic or mineral oxidizers (peroxides, perborates, percarbonates); Petroleum products (gasoline, kerosene, etc.); Urea. Substances not listed must be evaluated for compatibility prior to use

Hazardous Decomposition Products: Chlorine, nitrogen, nitrogen trichloride, cyanogen chloride, oxides of carbon, chloramines and phosgene.

11. TOXICOLOGICAL INFORMATION

Acute effects of exposure:

Inhalation: Toxic if inhaled. Inhalation of dust may cause irritation of upper and lower airways, coughing, laryngospasm and edema, shortness of breath, bronchoconstriction, and possible pulmonary edema. The pulmonary edema may develop several hours after a severe acute exposure.

Ingestion: Harmful if swallowed. Exposure by ingestion may cause irritation, nausea, and vomiting. May cause local tissue damage to esophagus and stomach such as burning, inflammation, local ulceration, and may cause gastrointestinal bleeding.

Skin contact: Dermal exposures along with moisture may cause redness, irritation, burning sensation, swelling, blister formation, first, second, or third degree burns. Dry material is less irritating than wet material. Repeated and prolonged skin contact may cause a dermatitis. Not a skin sensitizer.

Eye contact: Causes serious eye damage. Exposure to eyes may cause irritation and burns to the eye lids, conjunctivitis, corneal edema, and corneal burn. Significant and prolonged contact may cause damage to the internal contents of the eye.

Chronic effects: None known

Carcinogenicity: None of the components are listed as a carcinogen or potential carcinogen by IARC, NTP or OSHA

Germ cell mutagenicity: Solid Well Optimizer Blend was not mutagenic in 5 Salmonella strains and 1 E. coli strain with or without mammalian microsomal activation. Sodium metasilicate is not classified as a germ cell mutagen.

Reproductive Toxicity: No adverse effects on reproduction are known.

Numerical measures of toxicity:

Solid Well Optimizer Blend: LD50 Oral Rat: 1823 mg/kg; LD50 Skin Rabbit: >2000 mg/kg; LC50 Inhalation Rat: 0.6 mg/L/4 hr.
Sodium acid acetate: LD50 Oral Rat: >5000 mg/kg; LD50 Skin Rat: >5000 mg/kg
Carbonic acid disodium salt: LD50 Oral Rat: 2800 mg/kg; LD50 Skin Rabbit >2000 mg/kg; LC50 Inhalation Guinea pig: 0.8 mg/L/2 hr.

12. ECOLOGICAL INFORMATION

Ecotoxicity: Very toxic to aquatic life with long lasting effects.
Solid Well Optimizer Blend: LC50 rainbow trout 0.13-0.36 mg/L/96 hr. EC50 daphnia magna 0.196 mg/L/48 hr.

Sodium acid acetate: LC50: Fish > 5,000 mg/L/ 96 hr. EC50: Aquatic Invertabrates > 50 mg /L/48 hr.
Carbonic acid disodium salt: LC50: Bluegill fish 320 mg/L/96 hr.EC50: Daphnia magna: 265 mg/L/48 hr
Persistence and degradability: This material is subject to hydrolysis. Cyanuric acid produced by hydrolysis is biodegradable.
Bioaccumulative potential: This material hydrolyses in water liberating free available chlorine and cyanuric acid. These products are not bioaccumulative.
Mobility in soil: No data available.
Other adverse effects: This product is very toxic to fish and aquatic organisms. This product is very toxic to aquatic life with long lasting effects. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of appropriate regulatory requirements (e.g. permit and the permitting authority has been notified in writing prior to discharge). Do not discharge effluent containing this product into sewer systems without previously notifying the sewage treatment plant authority. For guidance, contact your local or regional regulatory water boards and/or other appropriate regulatory offices.

13. DISPOSAL CONSIDERATIONS

Dispose in accordance with applicable local, regional, national, and/or international regulations**.**

14. TRANSPORT INFORMATION

This product is not regulated unless transported in bulk or by vessel. Foe bulk packages and vessel transport, the following applies:
UN number: UN3077
Proper shipping name: Environmentally Hazardous Substances, solid, n.o.s. (Well Optimizer Blend)
Transport hazard classes(es): 9
Packing group, if applicable: III
Environmental hazards: Marine Pollutant

Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code): Not applicable. Transported in packaged form only.

Special precautions: None known

15. REGULATORY INFORMATION

CERCLA: Not regulated
SARA Hazard Category (311/312): Refer to Section 2 for the OSHA Hazard Classification
SARA 313: No components are listed
EPA TSCA Inventory: All components are listed on the TSCA inventory. Not subject to export notification.

CANADA:
Canadian CEPA: All components are listed on the Canadian DSL.

16. OTHER INFORMATION

SDS Revision History: New SDS
Date of preparation: July 27, 2021
Date of last revision: Not applicable

NOTICE

This above information is believed to be correct but does not propose to be all inclusive and shall be used only as a guide. FutureWell Group shall not be held liable for any damage resulting from handling or from contact with the above product. This information relates only to the product designated herein and does not relate to its use in combination with any other material or process.