

SaniFrac 8015

SOLUTION

A MICROBIOCIDAL FOR USE IN CONTROLLING BACTERIA INCLUDING SLIME -FORMING BACTERIA, SULFATE-REDUCING BACTERIA, FUNGI, YEAST AND ALGAE. FOR USE IN PAPER MILLS AND PAPER MILL PROCESS WATER SYSTEMS, PIGMENTS AND FILLER SLURRIES FOR PAPER AND PAPERBOARD, WATERBASED COATINGS FOR PAPER AND PAPER BOARD, AIR WASHERS AND INDUSTRIAL SCRUBBING SYSTEMS, SERVICE WATER AND AUXILIARY SYSTEMS, RECIRCULATING COOLING AND PROCESS WATER SYSTEMS INCLUDING THOSE THAT CONTAIN NON-MEDICAL REVERSE OSMOSIS MEMBRANES, HEAT TRANSFER SYSTEMS, AND WASTEWATER SYSTEMS INCLUDING WASTEWATER SLUDGE AND HOLDING TANKS AND IN OIL WELL DRILLING, OIL FIELD PROCESSING APPLICATIONS, AND OIL FIELD WATER SYSTEMS, GAS PRODUCTION AND TRANSMISSION PIPELINES AND SYSTEMS, AND GAS STORAGE FIELDS AND EQUIPMENT; SUCH AS, STEAM-INJECTION WATER HOLDING TANKS, FLOOD WATER, INJECTION WATER, HOLDING POND WATER, DISPOSAL-WELL WATER, WATER HOLDING TANKS, FUEL STORAGE TANKS, AND RELATED REFINERY AND OIL FIELD CLOSED, INDUSTRIAL RECIRCULATING WATER HANDLING SYSTEMS.

ACTIVE INGREDIENTS:

Glutaraldehyde 15%

REGISTRATION NO. 33373
PEST CONTROL PRODUCTS ACT

COMMERCIAL

DANGER

CORROSIVE {Corrosive Logo}

READ THE LABEL BEFORE USING

{ Calfrac logo }

Calfrac Well Services Ltd.
411-8th Avenue SW
Calgary, Alberta
T2P 1E3

IN CASE OF AN EMERGENCY endangering life or property involving this product, call 800-424-9300 (or 1-703-527-3887 International).

Net contents:

Made in USA

PRECAUTIONS

HAZARDS TO HUMANS

DANGER

KEEP OUT OF REACH OF CHILDREN

Corrosive. Causes irreversible eye damage. Causes skin irritation. Harmful if inhaled. Harmful if swallowed. Harmful if absorbed through skin. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Causes asthmatic signs and symptoms in hyperreactive individuals.

Do not get in eyes, on skin, on clothing. Avoid breathing vapor. Do not swallow.

Wear face shield, coveralls over a over long -sleeved shirt and long pants, chemical resistant gloves, socks and chemical-resistant footwear and eye protection during mixing, loading, application, clean-up and repair. Wash thoroughly with soap and water after handling. Use only in well ventilated area. Remove contaminated clothing and shoes and wash them before reuse.

FIRST AID

IF IN EYES: Wash immediately and continuously with flowing water for at least 30 minutes. Remove contact lenses, if present, after the first 5 minutes and continue washing. Call a poison control centre or doctor immediately for treatment advice.

IF ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call poison control centre or doctor for treatment advice.

IF INHALED: Move person to fresh air. If person is not breathing, call 911 or an ambulance, and then give artificial respiration, preferably mouth -to mouth if possible. Call a Poison Control Centre or a doctor for treatment advice.

IF SWALLOWED: Contact a poison control centre or doctor immediately for treatment advice. If the person is fully alert and cooperative, have the person rinse mouth with plenty of water. In cases of ingestion have the person drink 120 - 240 mL (4 to 8 ounces) of water. Do not induce vomiting. Do not attempt mouth rinse if the person has respiratory distress, altered mental status, or nausea and vomiting.

Take MSDS and, if available, the container, label or product name and Pest Control Product Registration Number with you when calling a poison control centre or a doctor, or when seeking medical attention.

ENVIRONMENTAL HAZARDS

This product is toxic to aquatic organisms. It is not to be used in circumstances that would cause or allow it to enter lakes, streams, ponds, estuaries, oceans or other waters in contravention of federal or provincial regulatory requirements. The requirements of applicable laws should be determined before using the product. DO NOT discharge effluent containing this product into sewer systems, lakes, streams, ponds, estuaries, oceans or other waters.

TOXICOLOGICAL INFORMATION

Aspiration may cause lung damage. Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock, respiratory depression and convulsion may be needed.

STORAGE AND HANDLING

To prevent contamination store this product away from food and feed.

SaniFrac 8015 solutions are incompatible with many commonly used materials of construction such as steel, galvanized iron, aluminum, tin, and zinc. These solutions can be stored and handled in baked phenolic -lined steel, polyethylene, stainless steel, or reinforced epoxy-plastic equipment. This product freezes at about -6.5°C . Therefore, unless the storage tank is inside or underground, heating and insulation may be required. If heating is needed, exposure to high temperatures should be avoided. For short storage times (up to about 1 month), temperatures of up to 38°C can be tolerated but the preferred maximum storage temperature is about 27°C .

A stainless steel centrifugal pump is suggested for transfer service. Spiral wound stainless steel with TEFLONTM is suitable for gaskets and packing.

Handle in a well -ventilated area. If vapors are irritating to the nose or eyes, special ventilation or respiratory protection (MSHA/NIOSH approved air purifying respirator equipped with an organic vapor cartridge) may be required.

The product in its undiluted form must not be used in a spray or aerosol application.

DISPOSAL:

1. Triple- or pressure-rinse the empty container. Add the rinsings to the treatment site.
2. Follow provincial instructions for any required additional cleaning of the container prior to its disposal.
3. Make the empty container unsuitable for further use.
4. Dispose of the container in accordance with provincial/ territorial requirements.
5. For information on disposal of unused, unwanted product, contact the manufacturer or the provincial/territorial regulatory agency. Contact the manufacturer and the provincial//territorial regulatory agency in case of a spill, and for cleanup of spills.

NOTICE TO USER:

This pest control product is to be used only in accordance with the directions on the label. It is an offence under the Pest Control Products Act to use this product in a way that is inconsistent with the directions on the label.

DIRECTIONS FOR USE

DO NOT open pour more than 20 L of concentrate per day. Use an automatic addition system if using more than 20 L of concentrate per day.

DO NOT contaminate irrigation or drinking water suppliers or aquatic habitats by cleaning of equipment or disposal of wastes.

DO NOT discharge effluent containing this product into sewer systems, lakes, streams, ponds, estuaries, oceans or other waters.

PAPER MILLS AND PAPER MILL PROCESS WATER SYSTEMS

SaniFrac 8015 should be added to the paper-making system at a point of uniform mixing such as the head box, beaters, broke chest pump, save-all tank, or white-water tank.

Initial Treatment: When the system is noticeably contaminated, add 0.8 kg to 5.0 kg of SaniFrac 8015 per metric tonne of pulp or paper (dry basis) as a slug dose. Repeat until control is achieved. Heavily fouled systems should be boiled out prior to initial treatment. Subsequent Dose: When microbial control is evident, add 0.5 kg to 3.3 kg of SaniFrac 8015 per metric tonne of pulp or paper (dry basis) as a slug dose as necessary to maintain control.

PIGMENTS AND FILLER SLURRIES FOR PAPER AND PAPER BOARD

Use from 0.33 to 2.0 grams of SaniFrac 8015 per Kg dry powder to produce a concentration of 333 to 2000 ppm as product (based on slurry solids) in the mixed slurry.

WATER BASED COATINGS

Note: For use in non-food contact coatings only.

Use from 0.33 to 2.0 grams of SaniFrac 8015 per Kg dry powder to produce a concentration of 333 to 2000 ppm as product (based on slurry solids) in the mixed slurry. When used as an in-can preservative in which paints may be applied in a residential setting, the maximum application rate for paints is 100 ppm.

AIR WASHERS AND INDUSTRIAL SCRUBBING SYSTEMS/RECIRCULATING COOLING AND PROCESS WATER SYSTEMS

This product may be used only in industrial air washers and air washer systems which have mist eliminating components.

SaniFrac 8015 should be added at the same application rates as described below, to a water treatment system at a convenient point of uniform mixing such as the basin area. Addition may be made intermittently (SLUG DOSE) or continuously. Badly fouled systems can be shock treated with SaniFrac 8015. Under these conditions, blowdown should be discontinued for up to 24 hours or more. SaniFrac

8015 can be used in industrial process water systems that contain ultra filtration units and non -medical reverse osmosis membranes (where approved for compatibility by the membrane manufacturer) and associated distribution systems.

INTERMITTENT (SLUG DOSE) METHOD

Initial Dose: When the system is noticeably fouled, apply 333 to 1300 ppm product of SaniFrac 8015 or 333 mL to 1.3 L of SaniFrac 8015 per 1000 Litres of water in the system. Repeat until control is achieved.

Subsequent Dose: When microbial control is evident, add 100 to 333 ppm of SaniFrac 8015 or 100 mL to 333 mL of SaniFrac 8015 per 1000 Litres of water in the system weekly, or as needed to maintain control. Badly fouled systems must be cleaned before treatment is begun.

CONTINUOUS FEED METHOD

Initial Dose: When the system is noticeably fouled, apply 333 to 1300 ppm product of SaniFrac 8015 or 333 mL to 1.3 L of SaniFrac 8015 per 1000 Litres of water in the system. Repeat until control is achieved.

Subsequent Dose: Maintain this treatment level by starting a continuous feed of 50 to 333 ppm of SaniFrac 8015 or 50 mL to 333 mL of SaniFrac 8015 per 1000 Litres of water in the system per day. Badly fouled systems must be cleaned before treatment is begun.

SERVICE WATER AND AUXILIARY SYSTEMS

SaniFrac 8015 should be used at the same application rates, and in the same manner as described above. It should be added to the system at a point that will allow uniform mixing throughout the system.

HEAT TRANSFER SYSTEMS

(Evaporative Condensers, Dairy Sweetwater Systems, Hydrostatic Sterilizers and Retorts, Pasteurizers and Warmers)

SaniFrac 8015 should be used at the same application rates, and in the same manner as described above. It should be added to the system at a point of uniform mixing such as a basin area, sump area or other reservoir or collecting area from which the treated water will be circulated uniformly throughout the system.

WATER FLOODS

SaniFrac 8015 should be added to a water flood system at a point of uniform mixing.

Initial Treatment: When the system is noticeably contaminated, add 330 to 16,670 ppm SaniFrac 8015 to the system (0.3 Liters to 16.6 Liters SaniFrac 8015 per 1000 liters flood water). Repeat until control is achieved.

Subsequent dose: When microbial control is evident, add 67 to 16,670 ppm SaniFrac 8015 (0.06 Liters to 16.6 Liters SaniFrac 8015 per 1000 liters flood water) to the system weekly, or as needed to maintain control.

DRILLING MUDS/DRILLING, COMPLETION, WORKOVER FLUIDS

SaniFrac 8015 should be added to a drilling fluid system at a point of uniform mixing such as the circulating mud tank.

Initial Treatment: Add 170 to 3,330 ppm SaniFrac 8015 (2.5 Liters to 50 Liters SaniFrac 8015 per 100 barrels of fluid) to a freshly prepared drilling fluid, depending on the severity of contamination.

Maintenance Dosage: Maintain a concentration of 170 to 3,330 ppm SaniFrac 8015 by adding 2.5 Liters to 50 Liters of SaniFrac 8015 per 100 barrels of fluid, as needed, depending on the severity of contamination.

PACKER FLUIDS

SaniFrac 8015 should be added to a packer fluid at a point of uniform mixing such as circulating holding tank. Add 170 to 2,000 ppm SaniFrac 8015 (2.5 Liters to 31.4 Liters SaniFrac 8015 per 100 barrels of fluid) to a freshly prepared fluid, depending on the severity of contamination. Seal the treated packer fluid in the wall between the casing and production tube.

GAS PRODUCTION AND TRANSMISSION PIPELINES AND SYSTEMS

SaniFrac 8015 should be added to a gas production or transmission line via direct injection. The application should be conducted to ensure maximum distribution of SaniFrac 8015 through the entire internal surface of the pipeline by adding an amount of biocide which eventually comes out the other end of the pipeline. Criteria for success of the treatment will be reduction in bacterial count and/or corrosion rates. To facilitate application, it may be desirable to dilute the SaniFrac 8015 with the appropriate solvent immediately before use. The concentration in the solvent should not fall below the 1,670 to 16,670 ppm range. Injections to the system should be made on a weekly basis, or as needed to maintain control.

GAS STORAGE WELLS AND SYSTEMS

Individual injection wells should be treated with sufficient quantity of SaniFrac 8015 to produce a concentration of 1,670 to 16,670 ppm SaniFrac 8015 when diluted by the water present in the formation. Injection should take place before gas is injected (during the summer). Injections should be repeated yearly, or as needed to maintain control. Individual drips should be treated with a sufficient quantity of SaniFrac 8015 to produce a concentration of 670 to 6,670 ppm SaniFrac 8015 when diluted by the water present in the drip. Injections should be repeated yearly, or as needed to maintain control.

HYDROTESTING

Water used to hydrotest pipelines or vessels should contain 330 to 13,330 ppm SaniFrac 8015 (0.3 Liters to 13.3 Liters SaniFrac 8015 per 1000 liters water), depending on water quality and length of time the equipment will remain idle.

PIPELINE PIGGING AND SCRAPING OPERATIONS

Add SaniFrac 8015 to a slug of water immediately following the scraper (ideally this water volume can be kept to a minimum and contained between the scraper and a trailing pig). Sufficient SaniFrac 8015 should

be added to produce a concentration of 0.3 to 3.3% (0.3 Liters to 3.3 Liters SaniFrac 8015 per 100 liters water), depending on the length of the pipeline and the severity of biofouling.

INDUSTRIAL WASTEWATER SYSTEMS

(Wastewater Systems, Wastewater Sludge and Wastewater Holding Tanks)

SaniFrac 8015 should be added to a wastewater system or sludge at a convenient point of uniform mixing such as the digester. Add 1.5 Liters to 7.5 Liters (1500 to 7500 ppm SaniFrac 8015) per 1000 Liters of wastewater or sludge.
