

Technical Data Sheet

BIONIC-C211: Biocide:

1. General Information

BIONIC-C211 is a concentrated biocide used to control aerobic and anaerobic bacteria including sulfate reducing types, which are commonly detected in oilfield water such as water disposal and water flood systems and water base drilling muds.

2. Typical Physical properties

Appearance	Transparent Amber liquid
Density, g/cm ³	1.1 ±0.05
Flash point	> 100 °C
Pour Point	<-5 °C
Solubility	Completely soluble in water

3. Recommended Use

BIONIC-C211 is recommended for the following Applications:

1. Water base drilling fluid.
2. Producing wells with high water/oil ratios.
3. Hydraulic testing of pipelines.
4. Fresh or seawater water flood bacterial control.
5. Pumping wells with H₂S in produced fluid and gases.

4. Suggested Treating Methods.

BIONIC-C211 treating rates will vary and depend on the severity of the bacteria problem, the treating method and the economics of treating a specific system. The following treating methods and rates are suggested:

1. Water base drilling fluid: initial treatment of to 1 lb/bbl of **BIONIC-C211** is recommended.
2. Annulus Protection & inhibition: Apply 320 liters of **BIONIC-C211** per 160 cubic meters of packer fluid diluent. (Approximately 2000 ppm of **BIONIC-C211**).

5. Storage/Handling

Keep away from heat, sparks and open flames. Keep containers closed. Other normal precautions for process chemicals apply. Do not get in eyes, on skin, on clothing. Do not take internally.

6. Storage conditions

Store in suitable labeled containers. Store the containers tightly closed. Store away from heat and sources of ignition. Store separately from oxidizers.

7. Human Health Hazards

• INHALATION

Irritating in high concentrations, to the eye, nose, throat and lungs.

• SKIN CONTACT

May cause irritation depending on the length of exposure and the type of first aid administered.

8. Suitable Construction Material

HDPE (high density polyethylene), Stainless Steel 304, Stainless Steel 316L, MDPE (medium density polyethylene).

9. Material Compatibility

Avoid contact with strong oxidizers (e.g. chlorine, peroxides, chromates, nitric acid, perchlorate, concentrated oxygen, permanganate). Avoid Contact with strong acids (e.g. sulfuric, phosphoric, nitric, hydrochloric, chromic and sulfonic). May generate heat, splattering or boiling and toxic vapors.

10. Packing

BIONIC-C211 is packaged in 200 kg drums.

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