

## MATERIAL SAFETY DATA SHEET

Prepared 2015 and Updated December 2020 by Macjames Global Resources Limited, Plot 10 Divine Avenue, Sunlight Estate, Umuebullu II, Etche LGA, Rivers State, Nigeria

### SECTION 1: CHEMICAL PRODUCT AND COMPANY INFORMATION

**PRODUCT NAME:**      **MACJAMES®MBIO-14A - BIOCIDAL LIQUID**

**PRODUCT USE:**              **BIOCIDAL for aerobic and anaerobic Sulphate-Reducing Bacteria (SRB).**

**MANUFACTURER:**              Macjames Global Resources Limited, Port Harcourt, Rivers State, Nigeria.

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**PACKAGING SIZES:**              **20 Litres, 25 Litres, 200 Litres and IBC tanks (1,000 Litres), others on request.**

### SECTION 2: INGREDIENTS/COMPOSITION

INGREDIENTS	% COMPOSITION (Wt) (APPROX.)
De-ionized water	50
Glutaraldehyde (Sol: 50% w/w)	30
Proprietary Blend	20
<b>Total % Composition (Wt)</b>	<b>- 100</b>

### SECTION 3: HAZARDS IDENTIFICATION

**PRIMARY ROUTES OF EXPOSURE:** Eye and Skin contacts.

**ACUTE OVEREXPOSURE EFFECTS:**

**EYE CONTACT:** Contact with solution may cause severe burns and permanent eye damage. Vapors are irritating to eyes. May cause irritation and redness.

**SKIN CONTACT:** May cause mild skin irritation. May cause skin irritation or burns with prolonged contact. May stain the skin. May cause a rash and itching of the skin.

**INHALATION:** Inhalation of solution vapor or mist may cause severe irritation or burns to the respiratory tract.

**INGESTION:** Harmful if swallowed. May cause severe damage of gastrointestinal tract. May cause nausea, vomiting and diarrhea. May be fatal if swallowed.

**EXPOSURE LIMITS:**

HAZARDOUS COMPONENT	ACGIH TLV	OSHA PEL
Glutaraldehyde	NA	CEIL - 0.02 ppm

## SECTION 4: FIRST AID MEASURES

- EYES:** Flush eyes with gently flowing lukewarm water. Get immediate medical attention.
- SKIN:** In case of contact, immediately flush skin with plenty of soap and water. Remove contaminated clothing and shoes. Seek medical attention if irritation persists.
- INHALATION:** If inhaled, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult.
- INGESTION:** Obtain medical assistance immediately. Do not induce vomiting, unless directed to do so by a physician. Do not give anything to drink. Never give anything by mouth to an unconscious person. Get medical attention.

## SECTION 5: FIRE FIGHTING METHODS

**SPECIAL HAZARDS:**

*Toxic vapors may be emitted in a fire situation.*

**EXTINGUISHING MEDIA:** Water fog. Carbon dioxide, dry chemical, foam.

**FIREFIGHTING PROCEDURES:**

Fire-fighters should wear self-contained breathing apparatus and full protective clothing when fighting chemical fires.

**HAZARDOUS COMBUSTION PRODUCTS:** Hydrocarbons. Oxides of carbon.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

**GENERAL PROCEDURE:**

Evacuate area and warn other workers of spill. Remove sources of ignition. Use only explosion proof transfer equipment. Prevent from entering sewers or waterways. Cover spill with absorbent material. Scoop absorbed material into a suitable container for disposal.

**SPECIAL PROCEDURE:**

**EVACUATION AND SAFETY:** Wear appropriate personal protective equipment when cleaning up spills. Refer to Section 8. Do not enter confined spaces without proper respiratory protection.

**CONTAINMENT OF SPILL:** Properly protected personnel may stop the source of the release if it can be done without risk. Contain release to prevent further contamination of soil, surface water or groundwater.

Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible absorbent materials.

**CLEANUP AND DISPOSAL:** Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations. Disposal should follow State/Federal guidelines for release reporting.

## SECTION 7: HANDLING AND STORAGE

- HANDLING:** Read properly and observe all precautions on product label. Wear appropriate hand gloves and PPE. Avoid contact with skin, eyes and clothing. Wear specified protective equipment. Wash hands after handling and before eating.
- STORAGE:** Keep container closed when not in use. Keep away from heat. Store away from sunlight. Does not use pressure to empty container or it may rupture with explosive force. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum re-conditioner or disposed of properly. The product should be stored in the original containers in a cool and dry location.

## SECTION 8: EXPOSURE CONTROLS/PERSONNEL PROTECTION

### SPECIFIC CONTROLS:

Adequate ventilation should be provided to keep concentrations below acceptable exposure limits. mechanical ventilation is recommended whenever this product is used in a confined space. Ensure use is in an area where there is natural air movement or provide mechanical ventilation.

### PERSONAL PROTECTIVE EQUIPMENT:

- EYES:** Wear eye protection such as safety glasses with side shields, chemical splash goggles or face shields.
- HANDS AND FEET:** Wear rubber or neoprene gloves. Use of rubber boots is recommended.
- RESPIRATORY:** Respiratory protection may be required for non ventilated work areas. If required use an air purifying respirator.
- BODY:** Rubber apron or coat is recommended.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>STATE:</b>	Liquid
<b>APPEARANCE:</b>	Colorless to light yellow
<b>ODOUR:</b>	Mild fruity
<b>ODOR THRESHOLD:</b>	Not available
<b>SPECIFIC GRAVITY:</b>	1.06
<b>VAPOR PRESSURE:</b>	0.2 mmHg @20C
<b>VAPOR DENSITY (air = 1):</b>	Not available
<b>EVAPORATION RATE:</b>	Not available
<b>BOILING POINT:</b>	98.9°C
<b>FREEZING POINT:</b>	Not available
<b>pH:</b>	4.5 - 5.6
<b>VISCOSITY:</b>	6.2 CSt
<b>SOLUBILITY IN WATER:</b>	Soluble

## SECTION 10: STABILITY AND REACTIVITY

<b>STABILITY AND REACTIVITY:</b>	Stable under normal conditions. May react with strong oxidizing agents
<b>INCOMPATIBILITIES:</b>	Strong oxidizers.
<b>HAZARDOUS DECOMPOSITION:</b>	Thermal decomposition products may include Hydrocarbons and Oxides of carbon.
<b>POLYMERIZATION:</b>	Does not occur.
<b>CONDITIONS TO AVOID:</b>	Avoid contact with strong oxidizers.

## SECTION 11 : TOXICOLOGICAL AND ECOLOGICAL INFORMATION

Exposure to this product may produce the conditions listed in Section 3. Releases may be reportable under local and state regulations.

**CHRONIC EFFECTS:** Prolonged or repeated exposure may result in redness and itchiness of the skin.

**SENSITIZATION:** May cause an allergenic skin response in some individuals. May cause an allergic respiratory reaction in hypersensitive individuals.

**CARCINOGENICITY:** None of the components of this product have been listed as carcinogenic by IARC, NTP or OSHA.

(IARC International Agency for Research on Cancer) (NTP - National Toxicology Program) (OSHA - Occupational Safety & Health Administration (US))

**MUTAGENICITY:** Not mutagenic

**REPRODUCTIVE TOXICITY:** Ingestion of Methanol and/or glutaraldehyde by pregnant women can cause reproductive toxicity to the fetus.

### ECOLOGICAL INFORMATION:

Toxic to aquatic organisms.

This product may affect aquatic plants and fish. It should be properly diluted with water before being released into the environment according to regulations.

## SECTION 12: TRANSPORTATION AND DISPOSAL INFORMATION

### TRANSPORT INFORMATION

Proper Shipping Name: Disinfectants, Liquid, Corrosive N.O.S.

Technical Name(s): Quaternary ammonium compound

It should be transported on the original container.

### DISPOSAL:

Should be properly diluted with water before disposal and disposal should be conducted in accordance with local and Federal Environmental guidelines. Once mixed with other materials it is the obligation of the user to determine the disposal method of the resulting mixture.

**SECTION 13: REGULATORY INFORMATION**

**Workplace Classification:** Hazardous

**TSCA Status:** All ingredients listed on or exempted from TSCA Chemical Inventory

SECTION 311/312 Immediate, Delayed

SECTION 313 This product does not contain ingredients (at a level of 1% or greater) on the List of Toxic Chemicals.

**SECTION 14: OTHER INFORMATION**

Any person handling this product should be informed of the recommended safety precautions and should have access to this information.

Customers are responsible for compliance with local, state and federal regulations that may be pertinent in the storage, application and disposal of this product.

**HAZARDOUS MATERIALS IDENTIFICATION SYSTEM (HMIS) RATING.**

<b>HEALTH</b>	<b>3</b>	<b>0 - Minimal</b>
<b>FLAMMABILITY</b>	<b>1</b>	<b>1 - Slight</b>
<b>PHYSICAL HAZARD</b>	<b>0</b>	<b>2 - Moderate</b>
<b>PERSONAL PROTECTION</b>	<b>1</b>	<b>3 - High</b>
		<b>4 - Very High</b>

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