

## MATERIAL SAFETY DATA SHEET

Updated October 2015 by Macjames Global Resources Limited, Plot 2 Obong Udo Akpan Udo Estate, Umuebullu II, Etche LGA, Rivers State, Nigeria.

### SECTION 1: CHEMICAL PRODUCT AND COMPANY INFORMATION

**PRODUCT NAME: MACJAMES® MSIA-14 - SCALE INHIBITOR**

**PRODUCT USE:** For inhibition of Calcium Carbonate, Calcium Sulphate, and Barium Scales in light density completion, treatment, and injection fluids, including seawater/brine.

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

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**PACKAGING AND NUMBER CODES:** 20Ltr - MSIA-14A: 25Ltr - MSIA-14B:  
200Ltr - MSIA-14C: 4 x 200-litre drums on a pallet.

### SECTION 2: MAJOR INGREDIENTS

INGREDIENTS	% COMPOSITION (Wt) (APPROX.)
Proprietary Blend	51
De-ionized water	44
Ammonium Chloride	5
<b>Total % Composition (Wt)</b>	<b>100</b>

### SECTION 3: HAZARDS IDENTIFICATION

This product is an acidic light yellow liquid. Not flammable.

**Potential Health Effects:**

**EYES:** Causes burns and untreated exposures may result in severe damage or blindness

**SKIN:** Causes corrosive burns

**INHALATION:** Mists can cause irritation and/or burns

**INGESTION:** Can burn mouth, esophagus and digestive tract.

**Carcinogen Status:** OSHA - No NTP - No IARC - No

### SECTION 4: FIRST AID MEASURES

**EYES:** Flush eyes with running water immediately while holding the eyelids open. Remove contact lenses, if worn. Flush with water repeatedly for at least 15 minutes. Get immediate medical assistance.

- SKIN:** Wash off immediately with running water and remove all contaminated clothing. Get immediate medical assistance. Thoroughly wash or clean the clothing before reuse.
- INHALATION:** Move the exposed person to fresh air. If not breathing, give artificial respiration, if breathing is difficult, give oxygen. Get medical attention.
- INGESTION:** If swallowed, do not induce vomiting. Never give anything by mouth to an unconscious person. If conscious, give the person several glasses of water to drink and get immediate medical attention.

**Notes to Physician: Treat symptomatically.**

### SECTION 5: FIRE FIGHTING METHODS

**MACJAMES®MSIA-14 - Scale inhibitor** is non-flammable liquid; Fire fighters should wear self contained breathing apparatus with full face masks. Use dry chemical, foam, carbon dioxide or water spray for fires involving this product.

**FLASH POINT:** None anticipated (water based solution)

**EXTINGUISHING MEDIA:** Use any standard agent to fight surrounding fire.

**FIRE FIGHTING:** Although water based, some organic components may evolve in the heat of a structural fire. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.

**FIRE AND EXPLOSION HAZARD:** Containers may rupture if exposed to heat of a fire or direct flames.

**PRODUCTS OF COMBUSTION:** May include carbon monoxide, carbon dioxide, and nitrogen oxides.

### SECTION 6: ACCIDENTAL RELEASE MEASURES

**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 or pumping.

**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. Wash thoroughly after handling. Ground containers to avoid development of static charges.

**STORAGE:** Keep container closed when not in use. Container is not designed to contain pressure. Does not use pressure to empty container or it may rupture with explosive force. Empty containers' retained product residue (solid, liquid, and/or vapor) and can be dangerous. 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. Keep from freezing.

### SECTION 8: EXPOSURE CONTROLS, PERSONNEL PROTECTION

**ENGINEERING CONTROLS:** Use in a well-ventilated area sufficient to keep vapors below safe exposure levels.

**Exposure Limits:**

Ingredient	ACGIH-TWA	ACGIH-STEL	OSHA-TWA	OSHA-STEL
Ammonium chloride	10mg/m <sup>3</sup>	20mg/m <sup>3</sup>	None	None

TWA: Time Weighted Average over 8 hours of work

**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 not normally required for properly ventilated work areas. If required use an air purifying respirator with acid and organic cartridges or a supplied air respirator.

**BODY:** Rubber apron or coat is recommended.

### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>State:</b>	Liquid
<b>Appearance:</b>	Light yellow
<b>Odour Characteristics:</b>	Moderate acidic
<b>pH:</b>	< 2
<b>Viscosity:</b>	2.9P
<b>Specific Gravity (H<sub>2</sub>O = 1):</b>	1.14
<b>Boiling Point:</b>	>170°C
<b>Water Solubility:</b>	Completely soluble in water.
<b>Volatility:</b>	Not volatile (contains no VOCs)
<b>Evaporation Rate (H<sub>2</sub>O = 1):</b>	≥1

**Freezing Point:** Below 0°C.  
**Coeff. Oil/water Distribution:** No data  
**Flash Point:** None anticipated (water based)  
**Autoignition temp:** Not applicable - does not burn.

### SECTION 10: STABILITY AND REACTIVITY

**STABILITY AND REACTIVITY:** Stable under normal conditions. May react with strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

**INCOMPATIBILITIES:** May also react with alkalis generating heat sufficient to cause spattering of liquid.

**HAZARDOUS DECOMPOSITION:** Thermal decomposition products may include toxic oxides of carbon and nitrogen.

**POLYMERIZATION:** Does not occur.

**CONDITIONS TO AVOID:** Avoid contact with strong oxidizers and alkalis.

### SECTION 11 : TOXICOLOGICAL AND ECOLOGICAL INFORMATION

**MACJAMES®MSIA-14 - SCALE INHIBITOR** is not known to be a carcinogen. Exposure to this product may produce the conditions listed in Section 3. Releases may be reportable under local and state regulations.

#### TOXICITY DATA :

##### Immediate Health Effects:

Acute Oral Toxicity: Material is corrosive  
 Acute Dermal Toxicity: Not determined  
 Eye Irritation: Corrosive  
 Skin Irritation: Corrosive

#### ECOLOGICAL DATA:

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

### SECTION 12: TRANSPORTATION AND DISPOSAL INFORMATION |

#### TRANSPORTATION:

Shipping Name: Corrosive liquid, acidic, inorganic.  
 Hazard Class or Division: 8  
 Packing Group: II  
 Labeling Requirements: Corrosive  
 Emergency Guide Number: 154

#### 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**

<b>Workplace Classification:</b>	Hazardous
<b>TSCA Status:</b>	All ingredients listed on TSCA Chemical Inventory
<b>CERCLA:</b>	No ingredients listed
<b>Clean Air Act:</b>	No ingredients listed
<b>OSHA Process Safety:</b>	Not applicable

**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>0</b>	<b>1 - Slight</b>
<b>PHYSICAL HAZARD</b>	<b>0</b>	<b>2 - Moderate</b>
<b>PERSONAL PROTECTION</b>	<b>C</b>	<b>3 - High</b>
		<b>4 - Very High</b>

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