



MATERIAL SAFETY DATA SHEET

UPDATED SEPTEMBER 2018 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® MSHYP-001 – SODIUM HYPOCHORITE (10%)

PRODUCT USE: Disinfection and Bleaching Agent (for water treatment, Cleaning and Odour extermination)

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

DPR Approval No.: DPR/HSE.04/003.700/2018/037

TELEPHONE: +234 818 959 6273

PACKAGING AND NUMBER CODES: 4 Litres - MSHYP-001A: 20 Litres - MSHYP-001B: 25 Litres - MSHYP-001C:
200 Litres - MSHYP-001D

SECTION 2: INGREDIENTS/COMPOSITION

INGREDIENTS	CAS NUMBER	% COMPOSITION (Wt) (APPROX.)
De-ionized water	7732-18-5	89.0
Sodium Hypochlorite	7681-52-9	10.0
Sodium Hydroxide	1310-73-2	1.0
Total % Composition (Wt)		- 100.0

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.

SECTION 4: FIRST AID MEASURES

EYES: Flush eyes with gently flowing cold water for 15 minutes. Get immediate medical attention.

SKIN: In case of contact, immediately flush skin with plenty of water. Cover skin with emollient. Remove contaminated clothing and shoes. Seek medical attention if irritation persists.

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www.macjamesglobal.com / info@macjamesglobal.com / +234 818 959 6273 / +234 803 677 4878



INHALATION: If vapour is 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

Flammability of the Product: Non-flammable

Auto-Ignition Temperature: Not applicable.

Flash Points: Not applicable.

Flammable Limits: Not applicable.

Products of Combustion: Not available.

Fire Hazards in Presence of Various Substances: combustible materials, metals, organic materials

Explosion Hazards in Presence of Various Substances:

Slightly explosive in presence of open flames and sparks. Non-explosive in presence of shocks.

Fire Fighting Media and Instructions: Not applicable.

Special Remarks on Fire Hazards:

Releases chlorine when heated above 35 deg. C. The substance itself is non-combustible and does not burn. However, when heated to decomposition it emits corrosive and/or toxic fumes. May ignite combustibles. Fire risk in contact with organic materials. Contact with metals may evolve flammable hydrogen gas.

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.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Small Spill:

Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

Large Spill:

Corrosive liquid. Oxidizing material. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material.

Do not get water inside container. Avoid contact with a combustible material (wood, paper, oil, clothing...). Keep substance damp using water spray. Do not touch spilled material. Use water spray curtain to divert vapor drift. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal and dispose of according to local regulations.

SECTION 7: HANDLING AND STORAGE

Precautions:

Keep locked up. Keep container dry. Keep away from heat. Keep away from sources of ignition. Keep away from combustible material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Never add water to this product. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as reducing agents, combustible materials, organic materials, metals, acids.

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Storage:

Keep container tightly closed. Keep container in a cool, well-ventilated area. Separate from acids, alkalis, reducing agents and combustibles. See NFPA 43A Code for more information on the Storage of Liquid and Solid Oxidizers. Air Sensitive to light. Store in light-resistant containers.

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

- STATE AND APPEARANCE:** Liquid
- COLOUR:** Colorless to greenish yellow
- ODOUR:** Chlorine-like
- ODOR THRESHOLD:** Not available
- SPECIFIC GRAVITY (H₂O =1):** 1.08
- VAPOR PRESSURE:** 17.25 mmHg @20C
- VAPOR DENSITY (air = 1):** 0.62
- EVAPORATION RATE:** Not available
- BOILING POINT:** 40°C (Decomposition Temperature)
- FREEZING POINT:** Not available
- pH (1% Solution/Water)** Neutral
- VOLATILITY:** Not available
- SOLUBILITY IN WATER:** Soluble

SECTION 10: STABILITY AND REACTIVITY

- STABILITY AND REACTIVITY:** The product is stable.
- Conditions of Instability:** Incompatible materials. light, air, heat.
- Incompatibility with various substances:** Reactive with reducing agents, combustible materials, organic materials, metals, acids. Stable under normal conditions. May react with strong oxidizing agents
- Corrosivity:** Extremely corrosive in presence of aluminum. Corrosive in presence of stainless steel(304), of stainless steel(316). Noncorrosive in presence of glass.
Sodium Hypochlorite is extremely corrosive to brass, and moderately corrosive to bronze.



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 some individuals.
- CARCINOGENICITY:** Not classifiable for humans.
- MUTAGENICITY:** Mutagenic for bacteria and/or yeast. Mutagenic for mammalian somatic cells.

ECOLOGICAL INFORMATION:

Ecotoxicity: Not available.
BOD5 and COD: Not available.

Products of Biodegradation:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The product itself and its products of degradation are not toxic.

SECTION 12: TRANSPORTATION AND DISPOSAL INFORMATION

TRANSPORT INFORMATION

- Proper Shipping Name:** Hypochlorite Solution, Corrosive material.
- Technical Name(s):** Sodium Hypochlorite solution, 5% available Chlorine
- Note:** Transport in original containers tightly covered and avoid contact with heat .

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

Gloves. Full suit. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Face shield.

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.

HEALTH	1	0 - Minimal
FLAMMABILITY	0	1 - Slight
REACTIVITY	1	2 - Moderate
PERSONAL PROTECTION	B	3 - High 4 - Very High



DISCLAIMER: This MSDS is intended to provide a brief summary of our knowledge and guidance regarding the use of this material. The information contained here has been compiled from sources considered by MacJames Global Resources Limited to be dependable and is accurate to the best of the Company's knowledge. It is not meant to be an all-inclusive document on worldwide hazard communication regulations. This information is offered in good faith. Each user of this material needs to evaluate the conditions of use and design the appropriate protective mechanisms to prevent employee exposures, property damage or release to the environment. MacJames Global Resources Limited assumes no responsibility for injury to the recipient or third persons, or for any damage to any property resulting from misuse of the product.

MINISTRY OF PETROLEUM RESOURCES

DEPARTMENT OF PETROLEUM RESOURCES

7 KOFO ABAYOMI STREET, VICTORIA ISLAND, LAGOS

P.M.B. No. 12650

Telephone: 01-2790000

Website: www.dprnigeria.com

The Managing Director

Macjames Global Resources Limited
37 Trans Amadi Industrial Layout
Rumuobiakani, Port Harcourt.



Ref. No. DPR/HSE.04/003.700/2018/037

Date: 22nd November 2018

Dear Sir,

RE-APPLICATION FOR CERTIFICATION/APPROVAL OF OILFIELD CHEMICALS

Arising from the review of the products SDS and the affirmation of their non-hazardous as well as non-toxic characteristics to aquatic organisms, we are pleased to convey our approval for the use of the Macjames® MSHYP-001 – Sodium Hypochlorite (10%) product in the Oil and Gas Industry.

3. This approval is for a period of three (3) years in the first instance from the date of this letter and is subject to periodic review by the Department as deemed necessary.
4. The use of this product shall be governed by the provision of section 25, of the petroleum (Drilling and Production) Regulations, 1969 as well as Environmental Guidelines and Standards for the Petroleum Industry in Nigeria (EGASPIN 2002) which were both issued pursuant to section 9(1)(b)(iii) of Petroleum Act, 1969.
5. Furthermore, any change in the composition or reformulation of this product that may wholly or partially alter the properties/ data submitted shall be promptly communicated to the Director of Petroleum Resources for the purpose of re-certification, as such changes automatically render this approval invalid.
6. Finally, this approval notwithstanding, the user of the product shall seek approval the Director of Petroleum Resources for the specific use under specified terms and conditions; and shall remain fully responsible for any damage done to the local environment on account of the use of the product.

Yours faithfully,

A handwritten signature in black ink, appearing to read 'Abdurrahman, A.S.'.

Abdurrahman, A.S

For: Director of Petroleum Resources