KENYA MEDICAL RESEARCH INSTITUTE

P. O. Box 54840 – 00200, NAIROBI, Kenya
Tel (254) (020 2722541, 2713349, 0722-205901, 0733-400003; Fax: (254) (020) 2720030
E-mail: director@kemri.org info@kemri.org Website: www.kemri.org

Material Safety Data Sheet

Product Name: TBcide
Product Code: 101
Alternative name: Bleach
Product Use: Disinfectant and sanitizer, see product label for all approved uses & instructions
Issue Date: 13/03/2020
Supersedes Date: None

HAZARDS IDENTIFICATION

Hazardous Ingredients: Sodium Hypochlorite**: 5.0-5.6% (w/v)**
Emergency Overview: May cause burns to the eyes, skin and mucous membranes
Appearance/Odor: Clear slightly yellow liquid solution with pungent chlorine smell
Warning: Keep out of reach of children.
Symptoms of Exposure: **Inhalation:** Strong irritating to mucous membranes of the respiratory tract.
Ingestion: May cause corrosion and damage to the gastrointestinal tract. Exposure characterized by nausea, vomiting, diarrhea and tissue ulceration.

Eyes: Contact is strongly irritating to the eyes. Vapor exposure can cause tearing, conjunctivitis and burning of the eyes.
Skin: Prolonged exposure may cause irritation, drying and cracking of the skin.

Statement: This product at concentrations equal to or greater than 0.1% does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP
This material contains a component that is considered hazardous by the OSHA Hazard. The concentrated solution is corrosive to skin, and a 5% solution is a severe eye irritant. Solutions containing more than 5% available chlorine are classified by DOT corrosive

Potential Environmental Effects: Do not contaminate waterways, may be an aesthetic nuisance due to color. Exposed wildlife would be subject to skin irritation and burns due to the corrosive nature of this material.
Hypochlorite is aggressive to metals

COMPOSITION/INFORMATION ON INGREDIENTS

Sodium Hypochlorite: 5.0-5.6%W/V
pH: 12.0-13.0

EMERGENCY AND FIRST AID PROCEDURES

Inhalation: Move exposed person to fresh air. If affected person is not breathing, apply artificial respiration. If breathing is difficult, give oxygen. Call a medical physician for further treatment advice.

Ingestion: If swallowed, do not induce vomiting, call medical physician immediately for treatment or advice

Eyes: If exposed, immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. If symptoms persist, get medical attention.

Skin: If irritation is experienced, flush the exposed skin immediately with plenty of water. If irritation persists, get medical attention.

FIRE FIGHTING MEASURES

Flash Point: This product does not flash.
Lower Flammable Limit: Not Applicable
Upper Flammable Limit: Not Applicable
Auto Ignition: Not Applicable
Flammability Classification: Not Applicable
Extinguishing Media: Use methods appropriate for the surrounding fire. Consider water spray or fog, carbon dioxide, dry chemical powder, or foam.
Fire and explosion hazard: this material is nonflammable but is decomposed by heat and light causing pressure buildup which could result in an explosion. When heated, it may release chlorine gas or hydrochloric acid Vigorous reaction with oxidizable or organic materials may result in fire.
Fire Fighting Equipment/Instructions: Wear full protective clothing and equipment suitable for the surrounding fire, including helmet, facemask, and self-contained breathing apparatus. Toxic gas vapors are produced upon decomposition.

ACCIDENTAL RELEASE MEASURES

Personal Precautions: For large spills wear gloves, safety glasses and when levels exceed OSHA PEL use appropriate NIOSH approved respiratory protection. Keep unnecessary personnel away.
Environmental Precautions: Prevent discharge to open waters.
Method for Containment: Absorb spilled liquid in suitable inert absorbent material and air vapors may be suppressed by use of a water fog. All run-off water should be captured for treatment and disposal. Notify applicable government authority if release is reportable or could adversely affect the environment
Methods for Clean-Up: Ventilate area of leak or spill. Use sodium sulfite, Sodium Thiosulfate and Sodium Bisulfite as deactivating chemicals. Wash deactivated spill area with water.

HANDLING AND STORAGE

Handling: Take precautions to prevent contact with skin or eyes. Wash thoroughly after handling. Avoid inhalation
Storage: Keep away from direct sunlight and heat.
Keep the container tightly closed and in a cool, dry, well ventilated place.
Long term storage is impossible without decomposition
Store the products below $30^{O}C$
Keep out of reach of children

EXPOSURE CONTROLS/PERSONAL PROTECTION

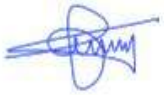
Engineering Controls: Provide good room ventilation plus local exhaust at points of emission and handling areas where mist, spray or vapors may be generated

Eye/Face Protection: Use chemical safety goggles when there is potential for contact (splashing), face shield recommended.

Skin Protection: Needed under normal use. Gloves and protective clothing made from rubber, vinyl, neoprene or PVC

Respiratory Protection: Needed when use in enclosed areas where concentrations are expected to exceed exposure limits. Use air purifying respirators

General Hygiene Considerations: None needed under normal use.



James H. Kimotho

HoD Production Department