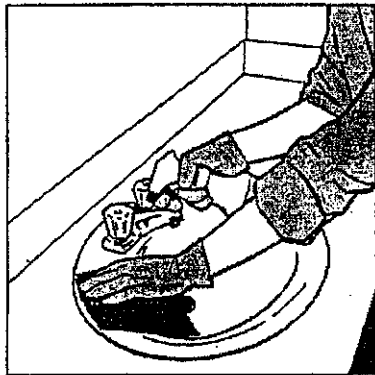


Royal Flush Bowl Cleaner

A ready-to-use hydrochloric acid-based bowl cleaner, disinfectant and deodorizer. Its cationic detergent system inhibits the acid corrosion of metal parts in toilet bowls and urinals. Effective against *Salmonella choleraesul*, *Staphylococcus aureus* and *Pseudomonas*



aeruginosa in addition to preventing odor caused by microorganisms.

CS

Where To Use

Homes Industry
Urinals Toilet Bowls

Dilution

As is

Directions

Disinfection - for gross filth and heavy soil, a pre-cleaning step is required for disinfecting. 1) To disinfect toilet bowls, flush toilet and add 4 ounces of this product directly to the bowl water. Swab bowl completely using a scrub brush or toilet mop, making sure to get under the rim. Let stand for 10 minutes and flush. 2) To disinfect urinals, add 2 ounces of this product to 48 ounces (1 1/2 quarts) of water. Flush urinal and apply solution with brush or toilet mop to urinal surface, making sure to scrub completely. Let stand for 10 minutes and flush. 3) for badly stained toilet bowls, flush toilet and use toilet mop to push water from the bowl over the trap. Press swab mop against bowl to remove excess water then saturate mop with 2 ounces of this product while holding bottle and applicator over bowl. Swab bowl completely making sure to get under the rim. Let stand for 10 minutes then flush. Rinse applicator completely.

Technical Specifications

COLOR: Transparent Blue	STORAGE(Unopened): 1 Year @R.T.
FORM: Liquid	BIODEGRADABLE: ... Yes
SCENT: Wintergreen	WEIGHT PER/GAL: 8.7 lbs.
pH: < 1.0	SHIPPING CLASS:..... 8, Packing Gr II
FLASH POINT:.. N/A	PACKAGING: 12x32 oz.
VISCOSITY: High	
TYPE: 9% Hydrochloric Acid Bowl Cleaner	



MATERIAL SAFETY DATA SHEET

Hill & Markes Inc.
 Edison Street, P.O. Box 7
 Amsterdam, NY 12010
 (518) 842-2410

REVISION DATE: 11/30/99
 DATE PRINTED: 11/30/99

PRODUCT NUMBER: SMZ 02012
 CONTROL NUMBER: F1175XXX

For chemical emergency information regarding this product, call Chem-Tel at 1-800-255-3924 anytime.

SECTION I - IDENTIFICATION

PRODUCT NAME: **Royal Flush Bowl Cleaner**
 PRODUCT TYPE: Acidic Liquid Cleaning Compound

SECTION II - HAZARDOUS INGREDIENTS

HAZARDOUS INGREDIENT	CAS NUMBER	PEL	PERCENT
Water	7732-18-5	No limits established	Not Listed
Hydrochloric Acid	7647-01-0	5 ppm PEL, STEL	
Nonylphenoxypolyethyleneoxyethanol	9016-45-9	No limits established	
Quaternary Ammonium Chloride Compound	Mixture	No limits established	

SECTION III - PHYSICAL DATA

APPEARANCE: Blue transparent liquid, pleasantly scented.
 BOILING POINT: 210 degrees F.
 VAPOR DENSITY: N/A
 PH: Less than 1.0

VAPOR PRESSURE: N/A
 SPECIFIC GRAVITY: 1.05
 SOLUBILITY IN WATER: Completely soluble.

SECTION IV - FIRE AND EXPLOSION DATA

FLASHPOINT: This product is non-flammable.
 EXTINGUISHING MEDIA: This product is non-flammable. Use extinguishing media suitable for materials already burning.
 SPECIAL FIRE FIGHTING PROCEDURES: Firefighters working in areas where this product is present should be equipped with an approved, fully enclosed SCBA with a plastic hood window.
 UNUSUAL FIRE AND EXPLOSION HAZARDS: None known.

SECTION V - REACTIVITY DATA

STABILITY: Stable under normal conditions.
 HAZARDOUS POLYMERIZATION: This product not known to polymerize.
 INCOMPATIBILITY: Ferrous metals, aluminum, zinc, magnesium and any other acid sensitive materials.
 HAZARDOUS BYPRODUCTS: Reaction with metals may liberate hydrogen chloride or hydrogen gas.

SECTION VI - HEALTH DATA

ROUTE(S) OF ENTRY: Inhalation, skin absorption, or ingestion.
 LISTED CARCINOGEN: Not listed by IARC, NTP or OSHA.
 MEDICAL CONDITION AGGRAVATED: None known.
 INHALATION: Inhalation of significant amounts of this product can cause damage to lungs resulting in edema.
 INGESTION: This material can cause burns and serious damage to throat, esophagus and stomach.
 EYES: Can cause serious burns and/or blindness.
 SKIN (DERMAL): This product may cause burns or irritation if not removed from the skin.

SECTION VII FIRST AID

IF THIS PRODUCT IS INHALED, GET IMMEDIATE MEDICAL ATTENTION!
 BREATHING (INHALATION): If this product is inhaled, get immediate medical attention!
 SWALLOWING (INGESTION): DO NOT INDUCE VOMITING! Drink a large quantity of water, followed by either milk or a minimum of 2 teaspoons of milk of magnesia. Do not attempt to give liquids to an unconscious person. Get immediate medical attention!
 EYES: Flush eyes with a large quantity of fresh water for at least 15 minutes. Apply ice compresses and GET IMMEDIATE EMERGENCY MEDICAL ATTENTION by an eye specialist. It may be necessary to take victim to a hospital emergency room.
 SKIN (DERMAL): Immediately flush from skin and clothing with large amounts of fresh water. Get immediate medical attention. Rewash contaminated clothing before wearing.

SECTION VIII EMPLOYEE PROTECTION

RESPIRATORY PROTECTION: If necessary, use an OSHA approved respirator for acid gases.
 PROTECTIVE CLOTHING: Nitrile, vinyl or neoprene gloves. Splash goggles and face shield. Protective outerwear and boots.
 ADDITIONAL MEASURES: Do not place this product in an unmarked container! Keep away from children! Spilled material is slippery.

SECTION IX - SPILL AND DISPOSAL DATA

SPILLS: Dike to prevent spillage into streams or sewer systems.
 Consult local, state and federal authorities.
 WASTE DISPOSAL: As recommended by local, state and federal authorities.
 HANDLING & STORAGE PRECAUTIONS: Do not store in metal containers. Store at ambient temperatures. Keep from freezing. DO NOT TRANSFER TO UNMARKED CONTAINERS. KEEP AWAY FROM CHILDREN.

SECTION X - OTHER REGULATORY INFORMATION

PROPER SHIPPING NAME: Hydrochloric Acid Solution
 CONSTITUENT: N/A
 HAZARD CLASS AND LABEL: 8 Corrosive
 ID NUMBER: UN 1789
 PACKING GROUP: II

NEPA HEALTH: 3
 NEPA FLAMMABILITY: 0
 NEPA REACTIVITY: 0
 NEPA OTHER: Acid

SECTION XI - PRECAUTIONARY STATEMENTS

WARNING: The information contained in this MSDS is based on the data available to us from sources we believe to be reliable. No warranty or guaranty expressed or implied is made regarding the accuracy of this data or the results obtained from the reliance on this data. The manufacturer assumes no responsibility for injury from the use of this product. Be sure to read this product safety information and pass it on to all persons who may be exposed to this product. Federal law requires it.