



## MATERIAL SAFETY DATA SHEET (MSDS) SAFETY DATA SHEET (SDS)

MSDS Date: May 22, 2009

### 1. IDENTIFICATION OF SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

**IDENTIFICATION OF PREPARATION:** Hygenall Industrial™

**USE OF PREPARATION:** Toxic Metal Skin Decontamination

**COMPANY IDENTIFICATION** Mk-IX Technologies Corporation  
6275 University Drive  
Suite 37-390  
Huntsville, AL 35806

**PHONE:** 866-750-0906  
**FAX:** 202-449-9675

**MSDS PREPARED BY:** Chemistry & Industrial Hygiene, Inc., (800) 420-9311, on the date shown above.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations of Canada and the MSDS contains all the information required by the Controlled Products Regulations.

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

MATERIAL	CAS NUMBER	EC NUMBER	Hazard Classification
Citric Acid	77-92-9	201-069-1	X <sub>i</sub> , R37/38-41
Water	7732-18-5	231-791-2	Not Classified
Isostearamidopropyl Morpholine Lactate	72300-24-4	Not Listed	Not Classified

See Section 16 for details on Hazard Classifications.

Information regarding proprietary ingredients is available from the manufacturer upon request.

### 3. HAZARDS IDENTIFICATION

**Canadian WHMIS for the preparation:**  
Not Classified

**EU PREPARATION CLASSIFICATION (1999/45/EC):**  
Not Classified

**EMERGENCY OVERVIEW:** Non-woven cloth wipe with applied aqueous solution. Not expected to be hazardous.

**POTENTIAL HEALTH EFFECTS:** Contact with undiluted materials may cause eye, skin, and respiratory irritation.

**ROUTES OF ENTRY:** Dermal: YES    Inhalation: UNLIKELY    Ingestion: POSSIBLE    Injection: UNLIKELY

#### 4. FIRST AID MEASURES

**SEEK IMMEDIATE MEDICAL ATTENTION IF IRRITATION OCCURS.**

**INHALATION:** Inhalation exposure unlikely due to physical form.

**EYES:** Immediately flush eyes with large amounts of temperate water for a minimum of 15 minutes. Consult an ophthalmologist for a more detailed medical evaluation.

**SKIN:** If irritation occurs, wash skin thoroughly with mild soap and room temperature running water. Remove contaminated clothing. Seek immediate medical attention if irritation continues.

**INGESTION:** Not expected to be a significant route of exposure based on expected use. If ingestion occurs, seek immediate medical attention.

**SYMPTOMS OF EXPOSURE:** May include irritation of the eyes and skin.

#### 5. FIRE FIGHTING MEASURES

**EXTINGUISHING MEDIA:** No limitations.

**FIRE FIGHTING EQUIPMENT:** No special protective equipment needed beyond routine firefighting gear.

#### 6. ACCIDENTAL RELEASE MEASURES

**GENERAL:** Avoid contact with eyes. Clean up with inert absorbent material. Sweep or scrape into approved container for proper disposal. See Section 13 for Disposal Considerations.

#### 7. HANDLING AND STORAGE

**HANDLING:** Avoid contact with eyes. Do not eat, drink, or smoke while handling this product.

**STORAGE:** Store in a tightly closed container and protect from heating and freezing.

#### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

MATERIAL	EXPOSURE LIMITS*		
	OSHA PEL <sup>(a)</sup>	ACGIH TLV <sup>(b)</sup>	NIOSH REL <sup>(c)</sup>
Citric Acid	None Established	None Established	None Established
Water	None Established	None Established	None Established
Isostearamidopropyl Morpholine Lactate	None Established	None Established	None Established

\*See Section 15 for additional Occupational Exposure Limits (OELs).

(a) U.S. Department of Labor, Occupational Safety and Health Administration, permissible exposure limit (PEL); (b) American Conference of Governmental Industrial Hygienists', threshold limit value (TLV); (c) National Institute for Occupational Safety and Health, recommended exposure limit (REL).

#### ENGINEERING CONTROLS:

None required with normal handling or consumer use.

## PERSONAL PROTECTIVE EQUIPMENT:

RESPIRATORY PROTECTION: None required under normal handling or consumer use.

SKIN PROTECTION: None required under normal handling or consumer use.

EYE PROTECTION: None required under normal handling or consumer use.

WORK/HYGIENE PRACTICES: Good personal hygiene should be exercised by all users of this product to minimize potential dermal exposures.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Non-woven cloth wipe with applied aqueous solution
Odor:	Not Applicable
Odor Threshold:	Not Applicable
Boiling Point:	Approx. 100°C or 212°F
Flash Point:	Not Applicable
Auto-ignition Temperature:	Not Applicable
Lower Explosive Limit (LEL):	Not Applicable
Upper Explosive Limit (UEL):	Not Applicable
Vapor Pressure:	Not Determined
Specific Gravity:	Approx. 1.0 (liquid expressed from wipe)
Total Volatile Organic Compounds (TVOC) (G/L):	Not Applicable
Solubility in Water:	Soluble (liquid expressed from wipe)
Partition Coefficient:	Not Determined
Viscosity of Solution:	Not Determined
Vapor density (Air=1.0):	Not Determined
Percent Volatility:	Not Applicable

## 10. STABILITY AND REACTIVITY

This material is stable under expected conditions of use, handling and storage.

**CONDITIONS TO AVOID:** Avoid contact with incompatible materials and extreme temperatures. Hazardous polymerization will not occur.

**INCOMPATIBLE MATERIALS:** Oxidizing agents, reducing agents, metals, alkalis.

**HAZARDOUS DECOMPOSITION:** CO<sub>x</sub>, NO<sub>x</sub>.

**EXOTHERMIC REACTION FIGHTING PROCEDURES:** Not expected to occur.

## 11. TOXICOLOGICAL INFORMATION

NO DATA AVAILABLE ON THE SPECIFIC MIXTURE.

### CITRIC ACID

NIOSH RTECS No.: GE7350000

Acute Effects of Overexposure: May cause eye, skin, and respiratory and digestive tract irritation.

Chronic Effects of Overexposure: None expected.

Target Organs: Eyes, skin, respiratory system.

Carcinogenicity: Not listed as a carcinogen by IARC, ACGIH, NTP, OSHA, or NIOSH.

Toxicity Data: Rat-Oral LD<sub>50</sub> = 3,000 mg/kg

### TOXICOLOGICAL INFORMATION (continued)

#### ISOSTEARAMIDOPROPYL MORPHOLINE LACTATE

NIOSH RTECS No.: Not Listed

Acute Effects of Overexposure: May cause eye and skin irritation.

Chronic Effects of Overexposure: No information available in sources utilized.

Target Organs: Eyes, skin.

Carcinogenicity: Not listed as a carcinogen by IARC, ACGIH, NTP, OSHA, or NIOSH.

Toxicity Data: Rat-Oral LD<sub>50</sub> > 5,000 mg/kg

## 12. ECOLOGICAL INFORMATION

**NO DATA AVAILABLE ON THE SPECIFIC MIXTURE.**

### CITRIC ACID

Ecotoxicity: LC<sub>50</sub>(48h) 440 mg/l Carp

Mobility: Soluble in water.

Persistence and Degradability: No information available in sources utilized.

Bioaccumulation Potential: No information available in sources utilized.

### ISOSTEARAMIDOPROPYL MORPHOLINE LACTATE

No information available in sources utilized.

## 13. DISPOSAL CONSIDERATIONS

**GENERAL:** Follow all applicable local, national, provincial, territorial, and international regulations. As supplied, this material is not regulated as a hazardous waste under the US EPA Resource Conservation and Recovery Act (RCRA). Refer to the European Waste Catalog (EWC) for appropriate waste code(s).

## 14. TRANSPORT INFORMATION

Not regulated by US DOT, ICAO/IATA, RID/ADR, IMDG, Canada TDG

## 15. REGULATORY INFORMATION

**CANADIAN ENVIRONMENTAL PROTECTION ACT:** All of the components of this product are listed on the Canadian Domestic Substances List (DSL).

**EPA TOXIC SUBSTANCES CONTROL ACT (TSCA) STATUS:** Isostearamidopropyl Morpholine Lactate is not listed on the TSCA inventory.

**EUROPEAN INVENTORY OF EXISTING COMMERCIAL CHEMICAL SUBSTANCES (EINECS):** Isostearamidopropyl Morpholine Lactate is not listed on the EINECS inventory.

**ADDITIONAL OCCUPATIONAL EXPOSURE LIMITS (OELs).** There are currently no established international OELs for the components of this product.

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## 16. OTHER INFORMATION

### HAZARD CLASSIFICATIONS:

X<sub>i</sub>=Irritant

### R-PHRASES:

R37/38-Irritating to respiratory system and skin  
R41-Risk of serious damage to eyes

**Current MSDS Revision Date:** May 22, 2009

**Previous MSDS Date(s):** New MSDS

**DISCLAIMER:** The information contained in this MSDS relates specifically to the product as a whole and may not be valid if used in combination with other materials or in any specified process. The information on Hygenall Industrial™ is accurate to the best of our knowledge but does not purport to be all inclusive and should only be used as a general guide. It is the user's responsibility to ensure that the product will be suitable for particular usage. The user assumes all responsibility for compliance with applicable Federal, State and Local Regulations. We do not accept liability for damage or loss that may occur from the use of this information.