



# MATERIAL SAFETY DATA SHEET

(According to ANSI Z400.1-2004)

**PRODUCT NAME: HARDENER-X**

**Previous Issue: September 8, 2005**

**Date Prepared: July 29, 2009**

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## 1. IDENTIFICATION OF PRODUCT AND COMPANY

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Product Name: **HARDENER-X**  
Company: **ULANO® CORPORATION**  
110 Third Avenue  
Brooklyn, NY 11217  
Phone: 718-237-4700  
Fax: 718-802-1119  
Emergency contact: 1-800-424-9300 (CHEMTREC)

MSDS prepared by: Fred Widman

Recommended use: Manufacture of textile screens and screenprinting stencils

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## 2. HAZARD IDENTIFICATION OF THE PREPARATION

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This preparation is classified as Corrosive liquid according to 29CFR 1910-1200.

Appearance / Odor: liquid / lightly pungent

Potential Health Effects: Eyes

Corrosive! This product causes burns and corneal damage

Potential Health Effects: Skin

Corrosive! Contact with skin can cause irritation or burns. Symptoms include itching and pain.

Potential Health Effects: Ingestion

Swallowing can cause burns of the mouth, throat and stomach. Symptoms may include nausea, diarrhea and vomiting.

Potential Health Effects: Inhalation

Signs of respiratory tract irritation (such as nasal discharge and difficulty breathing) may occur after exposure to aerosol or high vapor concentrations.

C Corrosive

34 Causes burns

37 Irritating to respiratory system

Target Organs: skin, eyes, and mucous membranes

This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

Potential Environmental Effects: See Section 12 for more information.

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## 3. COMPOSITION/INFORMATION ON INGREDIENTS

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Mixture of the below mentioned materials

Hazardous components:

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EINECS-No CAS-No.	Name R-phrases	Hazard	%content
231-595-7 7647-01-0	Hydrochloric Acid 34-37	C	0.5-10.0%

**Additional information:**

For full text of risk phrases see Section 16.

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**4. FIRST AID MEASURES**

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**After skin contact:**

Clean thoroughly with soap and water.

**After eye contact:**

Remove contact lenses; keep eyelids open, rinse under running water for at least 10 minutes. If irritation continues, seek medical advice.

**After ingestion:**

Do not induce vomiting - seek medical advice. If unconscious, do not administer anything orally. Place in stable side position and seek medical advice. If breathing is irregular or has stopped, apply artificial respiration.

**After Inhalation:**

If symptoms are experienced, remove from source of contamination or move victim to fresh air. If breathing has stopped, apply artificial respiration. Seek medical advice.

**Note to Physicians:** Treat as exposure to corrosives

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**5. FIRE-FIGHTING MEASURES**

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Flammable: no

Means of extinction: treat surrounding fire

Unsuitable extinguishing media: Hard water stream

Flash point: n.a

Upper flammable limit: n.a

Explosion data impact: n.a

Lower flammable limit: n.a

Explosion data static: n.a

Hazardous combustion products: typical carbon oxygen compounds.

Fire fighters should wear SCBA for fighting fires in enclosed areas.

Autoignition temp: n.a

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**6. ACCIDENTAL RELEASE MEASURES**

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Do not empty large quantities directly into drains. Collect with liquid absorbing material and proceed according to local waste disposal regulations.

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**7. HANDLING AND STORAGE**

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Keep container tightly closed and in a cool and well ventilated place.

Ensure adequate ventilation. Avoid contact with skin and eyes.

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## 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Occupational exposure limit:

CAS #	Name	OSHA TWA	ACGIH TWA
7647-01-0	Hydrochloric Acid	5 ppm Ceiling	2 ppm Ceiling

### Engineering controls

General- not required  
 Local exhaust- recommended  
 Other- none

### Personal Protection

Gloves- recommended  
 Respirator- not required  
 Eye- protective goggles recommended  
 Protective footwear- not required  
 Protective clothing- protective apron  
 Other- none

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Form: liquid  
 Color: red  
 Odor: mild  
 Flash point: n.a  
 Ignition temperature: n.a  
 Density: 1.03 g/cm<sup>3</sup>  
 Viscosity: liquid  
 Explosion limits: n.a  
 Boiling point: ~212°F (100° C)  
 Vapour density: >1(air=1)  
 Vapour pressure: not known  
 Freezing point: not known  
 pH: ~1  
 Coefficient of water/ oil distribution: not known

**Volatile Organic Compounds: less than 0.1%**

## 10. STABILITY AND REACTIVITY

Stable under recommended storage and handling conditions  
 (see Section 7).

Store as a corrosive liquid

INCOMPATIBILITY: Strong oxidizers, acids

## 11. TOXICOLOGICAL INFORMATION

Effects of acute exposure:

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COMPONENT	CAS#	LD <sub>50</sub>	LC <sub>50</sub>
Hydrochloric Acid	7647-01-0	900 mg/kg, oral, rabbit	3124 ppm / 1H, inhalation rat

**General information:**

Effects of acute exposure:

Repeated or prolonged contact causes burns of the skin mucous membranes and particularly the eyes.

Irritancy of product- Corrosive

Skin sensitization- Corrosive

Respiratory sensitization- Corrosive

Carcinogenicity- no

IARC- no

ACGIH - no

Reproductive toxicity - none known

Teratogenicity - none known

Embryotoxicity - none known

Mutagenicity - none known

Name of synergistic products/effects- none known

**12. ECOLOGICAL INFORMATION**

Do not empty large quantities into drains or release into open water.

Do not store at public waste disposal sites.

**13. WASTE DISPOSAL INFORMATION**

Dispose of as a corrosive aqueous waste

Empty container: scrap recycling or re-conditioning

Soiled container: (treatment like product itself)

**14. TRANSPORT INFORMATION**

ADR/RID/DOT/IATA: Class: 8

UN: 1760

Corrosive liquid, nos  
(hydrochloric acid)

Packaging group: III

IMDG: Class: 8

UN: 1760

Corrosive liquid, nos  
(hydrochloric acid)

Marine pollutant: no

Packaging group: III

**15. REGULATORY INFORMATION**

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)

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This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins under California Proposition 65 at levels which would be subject to the proposition.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of information required by the CPR, and it is classified as a code E hazardous material.

**Labeling**

C

**R-phrases:**

34 Causes burns  
37 Irritating to respiratory system

**S-phrases:**

24/25 Avoid contact with skin and eyes  
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice  
37/39 Wear suitable gloves and eye / face protection

**Special labeling:**

n.a

National Regulation for Germany:

Water pollution class: 2

--Canada--

Ingredient	TSCA	EC	DSL	NDSL
Hydrochloric Acid (7647-01-0)	Yes	Yes	Yes	No

Ingredient	-SARA 302-	SARA 313	-RCRA-	CERCLA	- TSCA	
	RQ	TPQ	List	RQ	261.33	8(d)
Hydrochloric Acid	5,000	500	yes	5,000	5,000	No

**16. OTHER INFORMATION****HMIS: Health 3, Flammability 0, Reactivity 0**

Text of risk phrases mentioned in Section 2:

C Corrosive  
34 Causes burns  
37 Irritating to respiratory system

For further information please refer to our technical information sheet. Data in this MSDS correspond with our current level of knowledge, but do not represent any assurance of product properties. The user personally is responsible for compliance with all legal requirements.

**DISCLAIMER OF RESPONSIBILITY:**

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