



# MATERIAL SAFETY DATA SHEET

(According to ANSI Z400.1-2004)

**PRODUCT NAME: HARDENER-D**

**Previous Issue: June 15, 2006**

**Date Prepared: May 6, 2009**

## 1. IDENTIFICATION OF PRODUCT AND COMPANY

Product Name: **HARDENER-D**  
 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

## 2. HAZARD IDENTIFICATION OF THE PREPARATION

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
43	May cause sensitization by skin contact
68	Possible risk of irreversible effects

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.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture of the below mentioned materials  
 Hazardous components:



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**8. EXPOSURE CONTROLS AND PERSONAL PROTECTION**

Occupational exposure limit:

CAS #	Name	OSHA TWA	ACGIH TWA
1310-73-2	Sodium Hydroxide	2 mg/m <sup>3</sup>	2 mg/m <sup>3</sup>
107-22-2	Glyoxal	not listed	0.1 mg/m <sup>3</sup>

**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: paste  
 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>
Sodium Hydroxide	1310-73-2	500 mg/24H, skin, rabbit, severe	No data
Glyoxal	107-22-2	200 mg/kg, oral, rat	2410 mg/m <sup>3</sup> , 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: II

**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  
 43 May cause sensitization by skin contact  
 68 Possible risk of irreversible effects

**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

Ingredient	TSCA	EC	--Canada--		TSCA	
			DSL	NDSL		
Sodium Hydroxide (1310-73-2)	Yes	Yes	Yes	No		
Glyoxal (107-22-2)	Yes	Yes	Yes	No		
Ingredient	-SARA 302-		SARA 313	-RCRA-	CERCLA	- TSCA
	RQ	TPQ	List	RQ	261.33	8(d)
Sodium Hydroxide	No	No	No	No	1,000	No
Glyoxal	No	No	No	No	No	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  
 43 May cause sensitization by skin contact  
 68 Possible risk of irreversible effects

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.

