



# MS-Hardener

PRODUCT TECHNICAL DATA SHEET



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## USAGE

Designed to chemically extend the water and discharge ink resistance of Murakami Direct Emulsions.

## HOW TO USE:

1. Completely process stencils. Make sure stencils are dry. Inspect and touch up screen as necessary.
2. Apply MS-Hardener solution to the screen using a sponge, soft cloth, or a spray bottle.
3. Completely dry screen after hardener is applied.
4. Inspect screen to see if any hardener has dried into the image area. Rinse with tap water to remove and Hardener residue. Allow screen to dry.

## HANDLING

1. The use of waterproof gloves and protective eyewear are recommended when using MS-Hardener.
2. Do not thin MS-Hardener with either water or solvent. Use as is in order to maximize it's effect.
3. The shelf life of MS-Hardener is approximately 1 year.

IMPORTANT: Technical data herein is believed to be accurate. It is offered for your consideration, investigation, and verification. Buyer assumes all risk of use, storage, and handling of the product. No warranty, express or implied is made, including but not limited to, implied warranties of merchantability and fitness for a particular purpose. Nothing contained herein shall be considered as a license to operate under, or recommendation to infringe any patents.



**MURAKAMI**

**MURAKAMI SCREEN USA, INC.** 745 Monterey Pass Rd. Monterey Park, CA 91754

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INFOTRAC  
EMERGENCY #  
800.535.5053

## MATERIAL SAFETY DATA SHEET

Date Prepared/Revised: March 1, 2006

### I. PRODUCT IDENTIFICATION

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Trade Name (as labeled): MS-HARDENER  
Manufacturer  
MURAKAMI SCREEN U.S.A.  
745 Monterey Pass Road  
Monterey Park, CA 91754  
PHONE NUMBER: 800-562-3534

### II. HARZADOUS INGREDIENTS

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	CAS NO.	% RANGE
Hydrochrolic	7647-01-0	1 – 5%

All ingredients of this product are listed under the TSCA INVENTORY.

### III. HEALTH HAZARD INFORMATION

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#### TOXICOLOGY

Threshold Limit Volume: 7.5 ppm. Hydrochrolic Acid (1991-1992 ACGIH TWA)

Inhalation      Excessive exposure may cause an edema of the lungs. Signs and symptoms of excessive exposure may be central nervous effect.

Skin Contact      Excessive exposure may cause minor irritation.

Eye Contact      May cause eye irritation. May cause moderate corneal injury.

### IV. FIRST AID PROCEDURES

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Never give fluids or induce vomiting if patient is unconscious or having convulsions. Medical conditions aggravated by exposure may be pre-existing skin or other physical conditions.

Ingestion      Induce vomiting if large amounts are ingested. Consult with medical personnel.

Eye      Flush with flowing water immediately and continuously for at least 15 minutes. Contact a physician if irritation persists.

Skin      In case of contact, immediately flush skin with plenty of water and remove contaminated clothing and shoes. Contact a physician if irritation persists. Wash clothing before reuse. Destroy contaminated shoes.

Inhalation      None.

NOTE TO PHYSICIAN: No specific antidote. Supportive care. Treatment based on judgment of the physician in response to reactions of the patient.

## **V. SPILL, LEAK, AND DISPOSAL PROCEDURES**

**MS-HARDENER**

Steps to be taken in case of spills or leaks

Spillage should be contained by, and covered with large quantities of sand, earth or similar absorbent material, then brushed in vigorously to assist absorption. The mixture can then be collected with a plastic shovel into drums or plastic bags or containers and removed for disposal. Prevent from flowing into ground or surface water.

Disposal Follow all relevant regulations for disposal. Check with your local authority.

Storing Store closed containers in a well-ventilated area. Do not store in sunlight, ground all equipment.

*NOTE: Dispose of all wastes in accordance with federal, state and local regulations.*

## **VI. PHYSICAL PROPERTIES**

Specific Gravity at 77°F (25° C): 1.01 –1.04                      Boiling Point: 100° C  
Viscosity at 77°F (25° C): 1cps                                      pH Value: 0.2 – 1.0  
Appearance and odor: Clear liquid with a slight pungent odor

## **VII. FIRE AND EXPLOSION**

Flash Point / Method: Not Flammable

Appropriate Extinguishers: Use water spray, foam, dry chemicals and carbon dioxide.

## **VIII. REACTIVITY DATA**

Stability: Stable under the normal conditions.

Conditions to Avoid: Heat and exposure to sunlight.

## **X. SPECIAL HANDLING PROCEDURES**

Ventilation and engineering controls: None required. Local Exhaust ventilations may be necessary for some operations.

Respiratory protection: None required under normal use conditions. If respiratory irritation is experienced, use an approved air-purifying respirator. For emergency conditions, use an approved self-contained breathing apparatus.

Eye Protection: Use safety glasses.

Gloves: Use vinyl or other protective gloves to prevent direct skin contact.

Storage: Protect from freezing.

## **IX. REPORTING REQUIREMENTS AND ADDITIONAL INFORMATION**

HMS Code System Rating=Health 1; Flammability 0; Reactivity 0.

NFPA 704 Code System Rating=Health 1; Flammability 0; Reactivity 0.

Volatile Organic Compound (VOC)=None.

Contains no carcinogen or petroleum hydrocarbons.

Note: Information herein is given in good faith and to the best of our knowledge, but no warranty, expressed or implied, is made.