

Section 1 Chemical Product and Company Identification

Product Identifier	MiraMag® Aqueous Developer
Product Number	IR-CHE8567
General Use	Developing images on pre-sensitized metal
Company Address	UEI Systems®, a UEI Group Company 9090 Nieman Road Overland Park, KS 66214 USA
Phone	+1 800 221 9059 or +1 913 541 0503
Emergency Contact Number	CHEMTREC – Available 24 hours/day, 7 days/week Domestic North America: +1 800 424 9300 International: +1 703 527 3887

Section 2 Hazards Identification

GHS Classification	Hazard Class	Hazard Category	Route of Exposure
	Skin Corrosion	1B	–
	Serious Eye Damage	1	–

GHS Labeling

Contains Sodium Metasilicate (6834-92-0)



Danger

Hazard Statements	Causes severe skin burns and eye damage
Precautionary Statements	Do not breathe mist, spray or vapors Wash skin thoroughly after handling Wear protective gloves/protective clothing/eye protection/face protection
Response	If Swallowed: Immediately call a Poison Center or doctor/physician if you feel unwell. Rinse mouth. Do not induce vomiting. If On Skin (or hair): Immediately remove/take off all contaminated clothing. Rinse skin with water/shower. If Inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If In Eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Specific treatment: See supplemental first aid instructions on this label.
Storage	Store locked up. Keep in original container. Store in corrosive resistant stainless steel container with a resistant inner liner.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations

Section 3 Hazardous Ingredients / Identity Information

Hazardous Components	CAS No.	%
Sodium Metasilicate	6834-92-0	5-10

Section 4 First Aid Measures

In all cases, call a physician immediately.

Inhalation	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
Ingestion	Do not induce vomiting. Rinse mouth with water.
Eye Contact	Immediately flush eyes with large amounts of water for at least 15 minutes. Continue rinsing eyes during transport to hospital.
Skin Contact	Immediately flush skin with large amounts of water for at least 15 minutes while removing contaminated clothing and shoes. Remove contaminated clothing and shoes.

Section 5 Firefighting Measures

Flammable/Combustible Properties	Sodium oxides, silicon oxides
Fire/Explosion	No data available
Extinguishing Media	Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide
Firefighting Equipment/Instructions	Wear self-contained breathing apparatus for firefighting, if necessary

Section 6 Accidental Release Measures

Personal Precautions	Wear chemical goggles, body-covering protective clothing, chemical resistant gloves, rubber boots and NIOSH-approved dust respirator where dust occurs
Environmental Precautions	Prevent runoff to sewers or waterways
Methods for Cleaning Up	Use absorbent material and place in non-leaking containers and tightly seal

Section 7 Handling and Storage

Handling Precautions	Do not get in eyes, on skin or on clothing. Do not breathe dust. Keep container closed. Promptly clean up spills. Wash hands thoroughly after handling.
Storage Requirements	Keep containers closed. Store in clean, tightly closed steel, fiber, or plastic containers. Separate from acids, reactive metals, and ammonium salts. Do not store in aluminum, fiberglass, copper, brass, zinc or galvanized containers. This product can absorb water from the air. In case of high humidity or storage for extended periods of time, use plastic bags to enclose product containers to avoid caking. Packaged inventory should be used on a first-in, first-out (FIFO) basis.

Section 8 Component Exposure Limits

Control Parameters	Contains no substances with occupational exposure limit values
Appropriate Engineering Controls	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
Personal Respiratory Protection	Where risk assessment shows air-purifying respirators are appropriate, use a full-face particle respirator.
Protective Hand Protection	Wear protective gloves
Eye Protection	Wear approved safety glasses when handling a chemical substance
Skin Protection	Wear protective clothing

Section 9 Physical and Chemical Properties

Appearance/Odor	White powder/no data	Odor Threshold	No data
pH	12.5 at 10 g/l at 68°F (20°C)	Boiling Point	No data
Melting Point Range	1,994° F (1,090° C)	Solubility (H₂O)	350 g/l at 68°F (20°C)
Specific Gravity	No data	Density	68 lbs/ft ³ at 68°F (20°C)
Octanol/H₂O Coefficient	No data	Evaporation Rate	No data
Molecular Weight	122.06	Decomposition Temperature	No data
Auto Ignition	No data	Upper /Lower Flammability Limit	No data
Flash Point	No data	Vapor Density	No data
VOC	No data	Vapor Pressure	10.0103 hPa (0.0077 mm Hg) at 2,147° F (1,175° C)
Flammability Class	No data	Viscosity	No data

Section 10 Chemical Stability and Reactivity

Stability	Stable
Conditions to Avoid	No data available
Incompatibility	Strong acids, Lead, Tin/tin oxides, Zinc, Aluminum
Hazardous Decomposition/By-Products	Solutions of sodium metasilicate, when heated or acidified, are hydrolyzed to free sodium ions and silicic acid.
Hazardous Polymerization	Will not occur

Section 11 Toxicological Information

Likely Routes of Exposure	Occupational exposure may occur through inhalation and dermal contact with this compound.
Acute Toxicity	
Acute Oral LD50	LD50 Oral (rat, male and female) 1,152 – 1,349 mg/kg
Acute Dermal LD50	No data available
Acute Inhalation LC50	No data available
Skin corrosion/irritation	Skin (rabbit) Result: Corrosive 4 h
Carcinogenicity	There are no known reports of carcinogenicity of ingredients.
Target Organ Effects	Inhalation: May cause respiratory irritation in the respiratory system
Reproductive Toxicity	No data available
Teratogenicity	In vitro genetic toxicity studies were negative.

Section 12 Ecological Information

Ecotoxicity									
Toxicity to Fish	<table border="1"> <thead> <tr> <th>Component</th> <th>Species</th> <th>Exposure Time</th> <th>LC50/EC50/IC50</th> </tr> </thead> <tbody> <tr> <td>Sodium Metasilicate (6834-92-0)</td> <td><i>Danio rerio</i> (zebra fish) bacteria</td> <td>96 hrs</td> <td>LC50 210 mg/l</td> </tr> </tbody> </table>	Component	Species	Exposure Time	LC50/EC50/IC50	Sodium Metasilicate (6834-92-0)	<i>Danio rerio</i> (zebra fish) bacteria	96 hrs	LC50 210 mg/l
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Sodium Metasilicate (6834-92-0)	<i>Danio rerio</i> (zebra fish) bacteria	96 hrs	LC50 210 mg/l						
Persistence/Degradability	No data available								
Bioaccumulative Potential	No data available								
Mobility in Soil	No data available								

Section 13 Disposal Considerations

Disposal Instructions Dispose in accordance with federal, state, provincial, and local regulations. Regulations may also apply to empty containers. The responsibility for proper waste disposal lies with the owner of the waste.

Section 14 Transportation Information

DOT (US)		IMDG		IATA	
UN number	1760	UN number	1760	UN number	1760
Class	8	Class	8	Class	8
Packing group	II	Packing group	II	Packing group	II
Proper shipping name		EMS-No	F-A, S-B	Proper shipping name	
Disodium trioxosilicate		Proper shipping name		Disodium tiroxosilicate	
Reportable Quantity (RQ)	NA	Disodium trioxosilicate			
Marine pollutant	No	Marine pollutant	No		
Poison Inhalation Hazard	No				

Section 15 Regulatory Information

Component Analysis – State

SARA 302 Components

SARA 302 No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

SARA 313 This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards Acute Health Hazard

TSCA⁴ - Toxic Substances Control Act Listed

Right To Know Components	CAS-No	Revision Date
Pennsylvania	No components are subject to the Pennsylvania Right to Know Act.	
New Jersey	No components are subject to the New Jersey Right to Know Act.	
Massachusetts	No components are subject to the Massachusetts Right to Know Act.	
California Prop 65	This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.	

Section 16

Other Information

UEI Systems® provides the information contained herein in good faith. It is believed to be correct. However it is not all-inclusive and should be used only as a guide. Individuals receiving this information must exercise their independent judgement in determining its appropriateness for a particular purpose. UEI Systems shall not be held liable for any damage resulting from handling or from contact with this product. All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources.

Abbreviations PEL Permissible Exposure Limit
TLV Threshold Limit Value

End Notes

1. SARA - Signed into law in 1986, the Superfund Amendments and Reauthorization Act (SARA) is an extension of CERCLA, and is intended to encourage and support local and state emergency planning efforts. SARA provides citizens and local governments with information about potential chemical hazards, and calls for facilities that store hazardous materials to provide officials and citizens with data on the type and amount on hand at specific locations. This field states whether a material is listed or not listed in section 372.65 of SARA. EHS - This states if a material is listed or not listed in Appendix B to part 355, the SARA Extremely Hazardous Substances (EHS) section. RQ is the reportable quantity. TPQ is the Threshold Planning Quantity.
2. RCRA - The Resource Conservation and Recovery Act enacted in 1976 and subsequently amended, controls solid-waste disposal and encourages recycling. This states whether a material is listed or not listed under this regulation. If listed the Hazardous Waste Number and waste characterization assigned by RCRA is also provided.
3. CERCLA - Enacted in 1980 and amended thereafter, the Comprehensive Environmental Response, Compensation, and Liability Act provides for identification and cleanup of hazardous materials released on land, into the air, waterways, and groundwater. It covers areas affected by newly released materials and older leaking or abandoned dump sites. This states whether a material is listed or not listed in CERCLA Table 302.4. If listed the section(s) that it is listed under and the Reportable Quantity (RQ) are also provided.
4. TSCA - The Toxic Substances Control Act controls the exposure to and use of raw industrial chemicals not subject to other laws. This states whether the chemical is listed or not listed under this regulation.

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Evidence <http://toxnet.nlm.nih.gov/>