SECTION 1: IDENTIFICATION

1.1 Product identifier

Product Name	HCR™ Bluing Reagent

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses	For research use only. Not for diagnostic use.

1.3 Details of the supplier of the data sheet

Company	Molecular Instruments, Inc. 5015 Eagle Rock Blvd Suite 301 Los Angeles, CA 90041
Telephone	+1 626 210 2600

SECTION 2. HAZARDS IDENTIFICATION

This safety data sheet complies with the requirements of Regulation EC 1907/2006.

2.1 Classification of the substance or mixture

GHS Classification

Health Hazards

Acute toxicity, Oral	Category 4, H302
Skin corrosion	Category 1, H314
Serious eye damage	Category 1, H318
Specific target organ toxicity (single exposure) (Respiratory system)	Category 3 H335
Short-term (acute) aquatic hazard	Category 1, H400

2.2 Label elements including precautionary statements

Signal Word		Danger
Hazard Statements		
	H302	Harmful if swallowed
	H314	Causes severe skin burns and eye damage
	H335	May cause respiratory irritation
	H400	Very toxic to aquatic life
Precautionary Statements		
	P261	Avoid breathing dust/fume/gas/mist/vapors/spray
	P264	Wash skin thoroughly after handling
	P270	Do not eat, drink or smoke when using this product
	P271	Use only outdoors or in a well-ventilated area

P273	Avoid release to the environment
P280	Wear protective gloves/protective clothing/eye protection/face protection
P301+P312+P330	If swallowed: Call a poison center/doctor if you feel unwell. Rinse mouth
P301+P330+P331	If swallowed: Rinse mouth. Do not induce vomiting
P303+P361+P353	If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
P304+P340+P310	If inhaled: Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center/doctor
P305+P351+P338+P310	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor
P363	Wash contaminated clothing before reuse
P391	Collect spillage
P403+P233	Store in a well-ventilated place. Keep container tightly closed
P405	Store locked up
P501	Dispose of contents/container to an approved waste disposal plant

2.3 Other hazards

Lachrymator.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Chemical Characterization

Mixtures

Formula: H_5NO

Molecular weight: 35.05 g/mol

3.2 Dangerous Components

Chemical Name	CAS-No	EINECS-No	Index-No	Weight %
Ammonium hydroxide	1336-21-6	215-647-6	007-001-01-2	30-50%

SECTION 4. FIRST AID MEASURES

4.1 Description of first aid measures

General information	Move to fresh air. If you feel unwell, seek medical advice. Show this safety data sheet to the doctor in attendance.
Inhalation	Move to fresh air. Consult a physician if necessary. If not breathing, give artificial respiration.

Ingestion	Rinse mouth. Consult a physician. Never give anything by mouth to an unconscious person. Do not induce vomiting without medical advice.
Skin Contact	Rinse immediately with plenty of water. Get medical attention if symptoms occur.
Eye Contact	Rinse immediately with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Remove contact lenses if present. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in Section 2.2 and/or in Section 11.

4.3 Indication of any immediate medical attention and special treatment needed.

No data available.

SECTION 5. FIRE-FIGHTING MEASURES

5.1 Extinguishing Media

Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media
For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards

Nitrogen oxides (NO_x)
Not combustible.
Ambient fire may liberate hazardous vapors.

5.3 Advice for fire fighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

5.4 Further information

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapors and/or aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.
For personal protection, see section 8.

6.2 Environmental Precautions

Should not be released into the environment. Prevent product from entering drains.

6.3 Methods and material for containment and clean up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent and neutralizing material. Dispose of properly. Clean up affected area.

6.4 Reference to other sections

For disposal, see section 13.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Provide good ventilation. Always wear recommended personal protective equipment. Avoid spilling. Avoid contact with skin, eyes, and clothing. Always open containers slowly to allow any excess pressure to vent.

7.2 Conditions for safe storage, including any incompatibles

Keep container tightly closed in a dry, cool, and well-ventilated place. Keep away from combustible material, strong acids, and strong bases. The recommended storage temperature is 2 – 8 °C. May develop pressure. Refrigerate before opening. Handle and open container with care. Storage class (TRGS 510): 8B: Non-combustible, corrosive hazardous materials.

7.3 Specific end use(s)

For research use only. Not for diagnostic use.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Workplace Exposure Limits (WEL)

Chemical Name	Cas-No.	Value	Control Parameters	Basis
Ammonium hydroxide	1336-21-6	TWA	25 ppm	USA. ACGIH Threshold Limit Values (TLV)
		STEL	35 ppm	USA. ACGIH Threshold Limit Values (TLV)
		TWA	25 ppm 18 mg/m^3	USA. NIOSH Recommended Exposure Limits
		ST	35 ppm 27 mg/m^3	USA. NIOSH Recommended Exposure Limits

8.2 Exposure controls

Appropriate Engineering Controls	Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.
Personal Protective Equipment	
Eye/Face Protection	Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU). Tightly fitting safety goggles.
Skin Protection	Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
Body Protection	Lightweight protective clothing.
Respiratory Protection	Required when vapors/aerosols are generated. Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN14387 and other accompanying standards relating to the used respiratory protection system.

Environmental Exposure Controls
Should not be released in the environment. Prevent product from entering drains.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties
Appearance: Liquid

9.2 Other information
Relative vapor density: 1.21 – (Air = 1.0)

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity
No specific reactivity associated with this product.

10.2 Stability
Chemically stable under standard ambient conditions (room temperature).

10.3 Possibility of hazardous reactions

Violent reactions possible with:
The generally known reaction partners of water.

10.4 Conditions to avoid

No data available.

10.5 Incompatible materials

Copper, Iron, Zing.

10.6 Hazardous decomposition products

In the event of fire: see section 5.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Toxicological information

Acute Toxicity

Chemical Name	LD50 (oral, rat/mouse)	LD50 (dermal, rat/rabbit)	LD50 (inhalation, rat/mouse)
Ammonium hydroxide	350 mg/kg	Not listed	Not listed

Principle Routes of exposure

Inhalation	May cause irritation of respiratory tract.
Ingestion	May be harmful if swallowed.
Skin contact	May cause skin irritation in susceptible persons.
Eye contact	May cause serious eye damage. Risk of blindness.

Potential Health Effects

Carcinogenetic effects	This product contains one or more substances which are classified as carcinogenic.
Mutagenic effects	No data available.
Reproductive toxicity	No data available.
Sensitization	No data available.
Specific target organ toxicity (single exposure)	May cause respiratory irritation. Acute inhalation toxicity – mucosal irritations, cough, shortness of breath, possible damages: damage of respiratory tract.
Specific target organ toxicity (repeated exposure)	No data available.
Aspiration hazard	No data available.
Other adverse effect	No data available.

SECTION 12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity

Chemical Name	Water Flea Data	Freshwater Fish Species Data
Ammonium hydroxide	Daphnia magna EC50 25.4 mg/L (48 h)	LC50 0.44 mg/L (96h)

12.2 Persistence and degradability
No data available.

12.3 Bioaccumulation potential
No data available.

12.4 Mobility in soil
No data available.

12.5 Other adverse effects
No data available.

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods
Avoid release into the environment. Disposal of contents and containers must comply with all requirements of local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

SECTION 14. TRANSPORT INFORMATION

IATA/ADR/DOT-US/IMDG
Not dangerous goods. Not regulated by transport regulations.

14.1 UN number Not applicable

14.2 UN proper shipping name Not applicable

14.3 Transport hazard class(es) Not applicable

14.4 Packaging group Not applicable

14.5 Environmental hazards Not applicable

SECTION 15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

US Federal Regulations
SARA 302
This product does not contain any components with a section 302 EHS TPQ.

SARA 313
The following components are subject to reporting levels established by SARA Title III, Section 313:

	CAS-No.	Revision Date
Ammonium Hydroxide	1336-21-6	2007-03-1

SARA 311/312 Hazards
Acute Health Hazard

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)
This product does not contain HAPs.

Massachusetts Right To Know Components
No components are subject to the Massachusetts Right to Know Act.

SECTION 16. OTHER INFORMATION

Disclaimer
The above information is believed to be correct but shall not be taken as being all inclusive and is to be used only as a guide. All materials and mixtures may present unknown hazards and should be used with caution. Since Molecular Instruments, Inc. cannot control the actual methods, volumes, or conditions of use, Molecular Instruments, Inc. shall not be held liable for any damages or losses resulting from the handling or from contact with the product as described herein. The information in this safety data sheet (SDS) does not constitute a warranty, expressed or implied, including any implied warranty of merchantability or fitness for any particular purpose. See www.hcrimaging.com/legal/terms for our terms of sale.