



SECTION 1: IDENTIFICATION

1.1 Product identifier

Product Name HCR™ HiFi Probe A

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.
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Los Angeles, CA 90041
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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

Classification according to Regulation EC 1272/2008

Physical and Chemical	Not classified
Human health	Repr. 1B – H360D
Environment	Not classified

Classification according to EU Directives 67/548/EEC or 1999/45/EC

T	Toxic
R40	Limited evidence of a carcinogenic effect.
R48/22	Harmful: danger of serious damage to health by prolonged exposure if swallowed.
R61	May cause harm to the unborn child.

GHS Classification

Health Hazards

Specific target organ system toxicity (repeated exposure)	Category 2
Carcinogenicity	Category 2
Reproductive Toxicity	Category 1B

Physical Hazards

Not hazardous

2.2 Label elements including precautionary statements

Contains



Formamide

Signal Word

Hazard Statements

Danger

H360D	May damage fertility or the unborn child
H351	Suspected of causing cancer if swallowed
H373	May cause damage to organs through prolonged or repeated exposure
P202	Do not handle until all safety precautions have been read and understood
P308+313	If exposed or concerned: Get medical advice/attention
P260	Do not breathe in dust/fume/gas/mist/vapors/spray
P201	Obtain special instructions before use
P281	Use personal protective equipment as required
P314	Get medical advice/attention if you feel unwell
P405	Store locked up

2.3 Other hazards

None.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Chemical Characterization

Mixtures.

3.2 Dangerous Components

Chemical Name	CAS No	EINECS No	Weight %
Formamide	75-12-7	200-842-0	4-30%
Citric acid	77-92-9	201-069-1	<1%

SECTION 4. FIRST AID MEASURES

4.1 Description of first aid measures

General information

If symptoms persist, call a physician. Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.



Inhalation	Move to fresh air. Consult a physician if necessary. If not breathing, give artificial respiration.
Ingestion	Rinse mouth and drink plenty of water. Consult a physician. Never give anything by mouth to an unconscious person. Do not induce vomiting without medical advice. Call a physician or poison control center immediately.
Skin Contact	Rinse immediately with plenty of water for at least 15 minutes. Take off all contaminated clothing. 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.

Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

5.1 Extinguishing Media

Alcohol-resistant foam, water spray, carbon dioxide (CO₂), or dry chemical.

5.2 Special hazards

Do not allow run-off from fire fighting to enter drains or water courses.

5.3 Advice for fire fighters

Wear self-contained breathing apparatus and protective suit.

5.4 Further information

Standard procedure for chemical fires. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

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. Do not use steel or aluminum tools or equipment. Avoid substance contact. Avoid dust formation. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

6.2 Environmental Precautions

Should not be released into the environment. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

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. Avoid dust formation. Clean up affected area.

6.4 Reference to other sections

Wear personal protective equipment as described in Section 8 of the safety data sheet.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Provide good ventilation in the process area. Always wear recommended personal protective equipment. Avoid contact with skin, eyes, and clothing.

7.2 Conditions for safe storage, including any incompatibles

Store at 2-8°C under sterile conditions. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep away from food and drink.

7.3 Specific end use(s)

For research use only.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Workplace Exposure Limits (WEL)

Chemical Name	Long-term exposure limit (8-hour TWA reference period)		Short-term exposure limit (15-minute reference period)	
Formamide	20 ppm	37 mg/m ³	30 ppm	56 mg/m ³

Engineering Measures

Ensure adequate ventilation, especially in confined areas. Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure.

8.2 Exposure controls

Personal Protective Equipment

Wear protective gloves/protective clothing and eye/face protection. Only wear fitting, comfortable, and clean protective clothing. With correct and proper use, and under normal conditions, breathing protection is not required.

Respiratory Protection

Tested protective gloves are to be worn: DIN-/EN-Norms: EN ISO 374.

Hand Protection

Tightly sealed safety glasses.

Eye Protection

Wear suitable protective clothing.

Skin and Body Protection



Environmental exposure controls

Refer to Section 6. No further action is necessary.

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

No data available.

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity

No specific reactivity associated with this product.

10.2 Stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

Exposure to light and heat.

10.5 Incompatible materials

No dangerous reactions under conditions of normal use.

10.6 Hazardous decomposition products

None under conditions of normal use.

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)
Formamide	3200 mg/kg	13500 mg/kg	3900 ppm/6H
Citric Acid	5400 mg/kg	-	-

Principle Routes of exposure
Potential Health Effects

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 eye irritation in susceptible persons.
 This product contains one or more substances which are classified as carcinogenic.

Carcinogenetic effects

No data available.

Mutagenic effects

May cause adverse reproductive effects.

Reproductive toxicity

No information available.

Sensitization

Cardiovascular system, Hematopoietic system.

Target organ effects

No data available.

Other adverse effect

SECTION 12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity

Chemical Name	Freshwater algae Data	Water Flea Data	Freshwater Fish Species Data
Formamide	EC50: > 500 mg/L (72 h) (D. subspicatus)	EC50: > 500 mg/L (48 h) (D. magna)	-
Citric Acid	-	1534 mg/L	LC50: 440 mg/L

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. Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste.



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 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.

Clean Air Act

This product does not contain any hazardous air pollutants, as defined by the US Clean Air Act.

Clean Water Act

This product does not contain any hazardous substances listed under the US Clean Water Act.

US State Regulations

Chemical Name	Massachusetts-RTK	New Jersey-RTK	Pennsylvania-RTK	Rhode Island-RTK
Formamide	Listed	Listed	Listed	Listed

California Proposition 65

This product does not contain any Proposition 65 chemicals.

International Regulations

Substances of very high concern

Chemical Name	Weight %	EU - REACH (1907/2006) - Article 59(1) - Candidate List of Substances for Eventual Inclusion in Annex XIV
Formamide	10-30	Toxic for reproduction (Article 57c)

Restricted substances under EC 1907/2006, Annex XVII

Chemical Name	Weight %	EU - REACH (1907/2006) - Annex XVII – Restrictions on Certain Dangerous Substances
Formamide	10-30	Restricted to professional users.

Substances listed under Annex I of Regulation (EC) No 689/2008

None.

Restricted substances under Annex V of Regulation (EC) No 689/2008

None.

Substances under Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC

None.

German water hazard classes

Chemical Name	Weight %	Germany – Water Classification (VwVwS) – Annex 1	Germany – Water Classification (VwVwS) – Annex 2 – Water Hazard Classes	Germany – Water Classification (VwVwS) – Annex 3
Formamide	10-30	-	Hazard class 1 – low hazard to waters	Hazard class 1 – low hazard to waters

Other countries

Chemical Name	EINECS (European Union)	ELINCS (European List of Notified Chemical Substances)	ENCS (Japan)	PICCS (Philippines)
Formamide	Listed	-	Listed	Listed

Chemical Name	AICS (Australia)	South Korea (KECL)	Canada (DSL)	NDSL
Formamide	Listed	Listed	Listed	-

15.2 Chemical safety assessment

No data available.



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.hcrlimaging.com/legal/terms for our terms of sale.