

SECTION 1: IDENTIFICATION
1.1 Product identifier

Product Name HCR™ HiFi Probe

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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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, H373
 Carcinogenicity Category 2, H351
 Reproductive toxicity Category 1B, H360D

Physical Hazards

Not hazardous

2.2 Label elements including precautionary statements

Contains formamide.



Signal Word		Danger
Hazard Statements	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.
Precautionary Statements	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.
	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

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.

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

No data available.

5.3 Advice for fire fighters

Wear self-contained breathing apparatus and protective suit.

5.4 Further information

No data available.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Always use personal protection equipment. Avoid exposure to vapors, mist, or gas. Ensure adequate ventilation. Avoid contact with skin, eyes, and clothing.

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

Soak up with inert absorbent material. Place used material into appropriate containers for disposal. Clean contaminated area thoroughly.

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. Always wear recommended personal protective equipment. Avoid spilling. Avoid contact with skin, eyes, and clothing.

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.

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	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

Respiratory Protection

In case of insufficient ventilation, wear suitable respiratory equipment.

Hand Protection

Wear impervious chemical-resistant gloves.

Eye Protection

Wear safety glasses with side shields or goggles.

Skin and Body Protection

Lightweight protective clothing.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

Environmental Exposure Controls

Should not be released into 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

None under normal use conditions.

10.4 Conditions to avoid

Direct sunlight. Extremely high temperatures.

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	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 eye irritation in susceptible persons.

Potential Health Effects

Carcinogenetic effects

This product contains one or more substances which are classified as carcinogenic.

Mutagenic effects

No data available.

Reproductive toxicity
 Sensitization

 May cause adverse reproductive effects.
 No data available.

 Target organ effects
 Other adverse effects

 Cardiovascular system, hematopoietic system.
 No data available.

SECTION 12. ECOLOGICAL INFORMATION
12.1 Ecotoxicity

Chemical Name	Freshwater algae Data	Water Flea Data	Freshwater Fish Species Data	Log Pow
Formamide	Desmodesmus subspicatus EC50 > 500 mg/L (72 h)	Daphnia magna EC50 > 500 mg/L (48 h)	-	logPow-0.82
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

Waste is classified as hazardous waste. Avoid release into the environment. Disposal of contents and containers must comply with all requirements of local regulations.

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 product is not regulated by SARA.

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contain HAPs.

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	4-20	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	4-20	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	4-20	-	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.molecularinstruments.com/terms for our terms of sale.