



## SECTION 1: IDENTIFICATION

### 1.1 Product identifier

Product Name HCR™ Probe Hybridization Buffer (v3.0)

### 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

#### 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

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
	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	10-30%
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**

<b>5.1 Extinguishing Media</b>	Alcohol-resistant foam, water spray, carbon dioxide (CO <sub>2</sub> ), or dry chemical.
<b>5.2 Special hazards</b>	No data available.
<b>5.3 Advice for fire fighters</b>	Wear self-contained breathing apparatus and protective suit.
<b>5.4 Further information</b>	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)	
	20 ppm	37 mg/m <sup>3</sup>	30 ppm	56 mg/m <sup>3</sup>
Formamide	20 ppm	37 mg/m <sup>3</sup>	30 ppm	56 mg/m <sup>3</sup>

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 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

Not 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

Mutagenic effects

Reproductive toxicity

Sensitization

Target organ effects

Other adverse effect

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

No information available.

May cause adverse reproductive effects.

No information available.

Cardiovascular system, Hematopoietic system.

No information 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 on bioaccumulation.

**12.4 Mobility in soil**

No information available.

**12.5 Other adverse effects**

No information 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.

<b>14.1 UN number</b>	Not applicable
<b>14.2 UN proper shipping name</b>	Not applicable
<b>14.3 Transport hazard class(es)</b>	Not applicable
<b>14.4 Packaging group</b>	Not applicable
<b>14.5 Environmental hazards</b>	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	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 chemical safety assessment has been carried out.

**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](http://www.molecularinstruments.com/terms) for our terms of sale.