

SECTION 1: IDENTIFICATION**1.1 Product identifier**Product Name HCRTM Pre-Hybridization Buffer**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 sheetCompany 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 HazardsSpecific target organ system toxicity (repeated exposure) Category 2
Carcinogenicity Category 2
Reproductive Toxicity Category 1BPhysical Hazards

Not hazardous

2.2 Label elements including precautionary statements

Contains

Formamide



Signal Word
Hazard Statements

Danger

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

5.1 Extinguishing Media	Alcohol-resistant foam, water spray, carbon dioxide (CO ₂), 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 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

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

Mutagenic effects

No information available.

Reproductive toxicity

May cause adverse reproductive effects.

Sensitization

No information available.

Target organ effects

Cardiovascular system, Hematopoietic system.

Other adverse effect

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.

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