



# SAFETY DATA SHEET

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

### GHS product identifier

Product Name RNA Extraction-Free Buffer

### Other means of identification

Product Code(s) 10380200, 10380400

Synonyms None

### Recommended use of the chemical and restrictions on use

Recommended Use General Laboratory Use

Uses advised against No information available

### Supplier's details

#### Supplier Address

HTG Molecular Diagnostics Inc.  
3430 E. Global Loop  
Tucson, AZ 85706  
TEL: (520) 547-2827  
FAX: (520) 547-2837

### Emergency telephone number

Emergency Telephone CHEMTREC: 1-800-424-9300 for US/ 703-527-3887 outside US Number

## 2. HAZARDS IDENTIFICATION

### Classification

This chemical is considered hazardous according to the OSHA Hazard Communication Standard 2012 (29 CFR 1910.1200)

Reproductive Toxicity	Category 1B
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### GHS Label elements, including precautionary statements

#### Emergency Overview

### Signal Word **Danger** Hazard Statements

- May damage fertility or the unborn child

3430 E. Global Loop | Tucson, AZ 85706 | (877) 289-2615 | htgmolecular.com

**Appearance** Clear**Physical State** Liquid.**Odor** None**Precautionary Statements****Prevention**

- Obtain special instructions before use
- Do not handle until all safety precautions have been read and understood
- Use personal protective equipment as required

**General Advice**

- IF exposed or concerned: Get medical attention/advice

**Storage**

- Store locked up

**Disposal**

- Dispose of contents/container to an approved waste disposal plant

**Hazard Not Otherwise Classified (HNOC)**

Not applicable

**Other information**

No information available.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %	Trade secret
Formamide	75-12-7	30-50	*

*\*The exact percentage (concentration) of composition has been withheld as a trade secret.*

### 4. FIRST AID MEASURES

**Description of necessary first-aid measures****Eye Contact**

Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Immediate medical attention is required.

**Skin Contact**

Wash off immediately with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Immediate medical attention is required.

**Inhalation**

Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Immediate medical attention is required.

**Ingestion** Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Immediate medical attention is required.

**Most important symptoms/effects, acute and delayed**

**Most Important Symptoms/Effects** No information available.

**Indication of immediate medical attention and special treatment needed, if necessary**

**Notes to Physician** Treat symptomatically.

## 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media**

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

**Unsuitable Extinguishing Media** CAUTION: Use of water spray when fighting fire may be inefficient.

**Specific Hazards Arising from the Chemical**

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

**Explosion Data**

**Sensitivity to Mechanical Impact** None.

**Sensitivity to Static Discharge** None

**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**

**Personal Precautions** Ensure adequate ventilation. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Do not breathe vapors or spray mist.

**Environmental Precautions**

**Environmental Precautions** See Section 12 for additional Ecological Information

**Methods and materials for containment and cleaning up**

**Methods for Containment** Prevent further leakage or spillage if safe to do so.

**Methods for Cleaning Up**

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly.

## 7. HANDLING AND STORAGE

**Precautions for safe handling**

**Handling**

Handle in accordance with good industrial hygiene and safety practice. Wear personal protective equipment. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Do not breathe vapors or spray mist. Do not ingest.

**Conditions for safe storage, including any incompatibilities**

**Storage**

Keep container tightly closed. Store at -20 Celsius degrees.

**Incompatible Products** Strong oxidizing agents. Acids. Bases.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Control parameters

### Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Formamide 75-12-7	TWA: 10 ppm S*	(vacated) TWA: 20 ppm (vacated) TWA: 30 mg/m <sup>3</sup> (vacated) STEL: 30 ppm (vacated) STEL: 45 mg/m <sup>3</sup>	TWA: 10 ppm TWA: 15 mg/m <sup>3</sup>

### Appropriate engineering controls

**Engineering Measures** Showers  
Eyewash stations  
Ventilation systems

### Individual protection measures, such as personal protective equipment

**Eye/Face Protection** Tightly fitting safety goggles.  
**Skin and Body Protection** Protective gloves. Lab coat and/or apron. Boots.  
**Respiratory Protection** If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

**Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Keep away from food, drink and animal feeding stuffs. Wash hands before breaks and immediately after handling the product. Remove and wash contaminated clothing before re-use. Provide regular cleaning of equipment, work area and clothing.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

**Partition coefficient: n-octanol/water** No data available  
**Appearance** Clear **Odor Threshold** No information available

<u>Physical State</u>	<u>Liquid</u>	<u>Remarks/ - Method</u>
<u>Odor</u>	<u>None</u>	
<u>Property</u>	<u>Values</u>	
pH		
Melting Point/Range	No data available	None known
Boiling Point/Boiling Range	No data available	None known
Flash Point	No data available	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limits in Air		
upper flammability limit	No data available	None known
lower flammability limit	No data available	None known
Vapor Pressure	No data available	None known
Vapor Density	No data available	None known
Relative Density	No data available	None known
Specific Gravity	No data available	None known
Water Solubility	No data available	None known
Solubility in other solvents	No data available	None known
Autoignition Temperature	No data available.	None known
Decomposition Temperature	No data available	None known
Viscosity	No data available	None known
<b>Flammable Properties</b>	Not flammable	None known
<b>Explosive Properties</b>	No data available	None known
<b>Oxidizing Properties</b>	No data available	None known
<u>Other information</u>		
VOC Content (%)	No data available	None known

## 10. STABILITY AND REACTIVITY

### Reactivity

No data available.

### Chemical stability

Stable under recommended storage conditions.

### Possibility of hazardous reactions

None under normal processing.

Hazardous polymerization does not occur.

### Conditions to avoid

Protect from moisture.

### Incompatible materials

Strong oxidizing agents. Acids. Bases.

### Hazardous decomposition products

Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). Nitrogen oxides (NO<sub>x</sub>).

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

#### Product Information

The product itself has not been tested. Description of possible hazardous to health effects is based on experience and/or toxicological characteristics of several ingredients  
Irritating to respiratory system. May be harmful by inhalation.

#### Inhalation

#### Eye Contact

Irritating to eyes. Vapor may cause irritation.

#### Skin Contact

May cause irritation. May be absorbed through the skin. May be harmful in contact with skin. Repeated or prolonged contact may cause localized dermal effects including contact dermatitis, dry skin, or rash.

#### Ingestion

May be harmful if swallowed.

### Toxicology data for the components

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Formamide	> 5000 mg/kg ( Rat )	-	> 3900 ppm ( Rat ) 6 h

### Symptoms related to the physical, chemical and toxicological characteristics

#### Symptoms

No information available.

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Sensitization

No information available.

#### Mutagenic Effects

No information available.

#### Carcinogenicity

There are no known carcinogenic chemicals in this product.

#### Reproductive Toxicity

Contains a known or suspected reproductive toxin. May damage fertility or the unborn child.

#### STOT - single exposure

No information available.

#### STOT - repeated exposure

May cause damage to organs through prolonged or repeated exposure: Reproductive system. Mucous Membrane. Respiratory system. Skin. Central nervous system (CNS). Eyes.

#### Aspiration Hazard

No information available.

### Numerical measures of toxicity - Product Acute Toxicity

No information available.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

The environmental impact of this product has not been fully investigated.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Formamide	EC50 72 h: > 500 mg/L (Desmodesmus subspicatus) EC50 96 h: > 500 mg/L (Desmodesmus subspicatus)	LC50 96 h: 4600-9300 mg/L static (Leuciscus idus) LC50 96 h: = 9135 mg/L static (Brachydanio rerio)	EC50 > 10000 mg/L 17 h	EC50 48 h: > 500 mg/L (Daphnia magna)

#### Persistence and Degradability

No information available.

#### Bioaccumulation

No information available.

Chemical Name	Log Pow
Formamide	-0.82

### Other Adverse Effects

No information available.

### 13. DISPOSAL CONSIDERATIONS

#### Waste Disposal Methods

This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

#### Contaminated Packaging

Do not re-use empty containers.

### 14. TRANSPORT INFORMATION

<b>DOT</b>	Not regulated
<b>TDG</b>	Not regulated
<b>MEX</b>	Not regulated
<b>ICAO</b>	Not regulated
<b>IATA</b>	Not regulated
<b>IMDG/IMO</b>	Not regulated
<b>RID</b>	Not regulated
<b>ADR</b>	Not regulated
<b>ADN</b>	Not regulated

### 15. REGULATORY INFORMATION

#### International Inventories

<b>TSCA</b>	Complies
<b>DSL</b>	Complies
<b>EINECS</b>	Complies
<b>ENCS</b>	Complies
<b>IECSC</b>	Complies
<b>KECL</b>	Complies
<b>PICCS</b>	Complies
<b>AICS</b>	Complies

#### Legend

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

#### U.S. Federal Regulations

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

#### SARA 311/312 Hazard Categories

<b>Acute Health Hazard</b>	Yes
<b>Chronic Health Hazard</b>	Yes
<b>Fire Hazard</b>	No
<b>Sudden Release of Pressure Hazard</b>	No
<b>Reactive Hazard</b>	No

**Clean Water Act**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

**U.S. State Regulations****California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Illinois	Rhode Island
Formamide	X	X	X		X

**U.S. EPA Label Information**

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION				
<b><u>NFPA</u></b>	Health Hazard 2	Flammability 0	Instability 0	Physical and Chemical Hazards -
<b><u>HMIS</u></b>	Health Hazard 2*	Flammability 0	Physical Hazard 0	Personal Protection X

**Prepared By**

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**Revision Date**

17-Apr-2013

**Revision Note**

Initial Release.

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

**End of Safety Data Sheet**