SAFETY DATA SHEET

According to JIS Z 7253:2019
Issue Date 13-Feb-2025
Revision Number 3.06

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name	2×RNA Loading Buffer without Ethidium Bromide
Product Code	182-02571

Supplier FUJIFILM Wako Pure Chemical Corporation
1-2 Doshomachi 3-Chome, Chuo-ku, Osaka 540-8605, Japan
Phone: +81-6-6203-3741
Fax: +81-6-6203-2029
Emergency telephone number +81-6-6203-3741 / +81-3-3270-8571
Recommended uses For research use only
Restrictions on use Seek expert judgment when using for purposes other than those recommended.

Section 2: HAZARDS IDENTIFICATION

GHS classification
Classification of the substance or mixture

Corrosive to metals	Category 1
Carcinogenicity	Category 2
Reproductive Toxicity	Category 1B
Specific target organ toxicity (single exposure)	Category 3
Category 3 Narcotic effects	
Specific target organ toxicity (repeated exposure)	Category 2
Category 2 Male reproductive system	

Pictograms

Signal word Danger

Hazard statements
H290 - May be corrosive to metals
H351 - Suspected of causing cancer
H360 - May damage fertility or the unborn child
H336 - May cause drowsiness or dizziness
H373 - May cause damage to the following organs through prolonged or repeated exposure: Male reproductive system

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
- Do not breathe dust/fume/gas/mist/vapors/spray
- Use only outdoors or in a well-ventilated area
- Keep only in original container

Precautionary statements-(Response)
- IF exposed or concerned: Get medical advice/attention
- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

• Absorb spillage to prevent material damage

Precautionary statements-(Storage)

• Store locked up
• Store in a well-ventilated place. Keep container tightly closed
• Store in corrosive resistant/ container with a resistant inner liner

Precautionary statements-(Disposal)

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

Others

Other hazards Not available

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Single Substance or Mixture Mixture

Chemical Name	Weight-%	Molecular weight	ENCS	ISHL No.	CAS RN
Formamide	95	45.04	(2)-684,(2)-681	*	75-12-7
Water	4.924	18.02	N/A	N/A	7732-18-5
Bromophenol Blue	0.025	669.96	(4)-907,(5)-3566	*	115-39-9
Sodium Dodecyl Sulfate	0.025	288.38	(2)-1679	*	151-21-3
Xylene Cyanol FF (1Na)	0.025	538.62	N/A	N/A	2650-17-1
Ethylenediaminetetraacetic acid disodium salt	0.0010	336.21	(2)-1265	*	139-33-3

Note on ISHL No.: * in the table means announced chemical substances.

Section 4: FIRST AID MEASURES

Inhalation

Remove to fresh air. If symptoms persist, call a physician.

Skin contact

Wash off immediately with soap and plenty of water. If symptoms persist, call a physician.

Eye contact

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediate medical attention is required.

Ingestion

Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately. Do not induce vomiting without medical advice.

Protection of first-aiders

Use personal protective equipment as required.

Section 5: FIRE FIGHTING MEASURES

Suitable extinguishing media

Carbon dioxide (CO2), Foam, Extinguishing powder, Sand

Unsuitable extinguishing media

No information available

Specific hazards arising from the chemical product

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

Special extinguishing method

No information available

Special protective actions for fire-fighters

Use personal protective equipment as required. Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

For indoor, provide adequate ventilation process until the end of working. Deny unnecessary entry other than the people involved by, for example, using a rope. While working, wear appropriate protective equipments to avoid adhering it on skin, or inhaling the gas. Work from windward, and retract the people downwind.

Environmental precautions

To be careful not discharged to the environment without being properly handled waste water contaminated.

Methods and materials for contaminent and methods and materials for cleaning up

Absorb dry sand, earth, sawdust and the waste. Collect empty container that can be sealed.

Recoverly, neutralization

No information available

Secondary disaster prevention measures

Clean contaminated objects and areas thoroughly observing environmental regulations.

Section 7: HANDLING AND STORAGE

Handling

Technical measures

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.Use with local exhaust ventilation. Use with local exhaust ventilation.

Precautions

Do not rough handling containers, such as upsetting, falling, giving a shock, and dragging. Prevent leakage, overflow, and scattering. Not to generate steam and dust in vain. Seal the container after use. After handling, wash hands and face, and then gargle. In places other than those specified, should not be smoking or eating and drinking. Should not be brought contaminated protective equipment and gloves to rest stops. Deny unnecessary entry of non-emergency personnel to the handling area.

Safety handling precautions

Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.

Storage

Safe storage conditions

Storage conditions	Store away from sunlight in cold (-20°C). Keep container tightly closed.
Safe packaging material	Polypropylene
Incompatible substances	Strong oxidizing agents

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls

In case of indoor workplace, seal the source or use a local exhaust system. Provide the safety shower facility, and hand- and eye-wash facility. And display their position clearly.

Exposure limits

Chemical Name	JSOH (Japan)	ISHL (Japan)	ACGIH
Formamide 75-12-7	N/A	N/A	TWA: 1 ppm Skin

Personal protective equipment

Respiratory protection	Protective mask
Hand protection	chemical protective gloves (JIS T 8116)
Eye protection	protective eyeglasses or chemical safety goggles (JIS T 8147)
Skin and body protection	Long-sleeved work clothes

General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice.

If this product is classified as ”Chemical Substances Hazardous to Skin, etc.”, use appropriate protective equipment to them.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Describes below as formamide, except "Appearance".

Form	
Color	Blue
Appearance	liquid
Odor	Slight peculiar odor
Melting point/freezing point	2.5 °C
Boiling point, initial boiling point and boiling range	210 °C (dec.)
Flammability	no data available
Evaporation rate:	no data available
Flammability (solid, gas):	no data available
Upper/lower flammability or explosive limits	
Upper：	no data available
Lower：	no data available
Flash point	154 °C
Auto-ignition temperature:	>500°C
Decomposition temperature:	no data available
pH	mild basic
Viscosity (coefficient of viscosity)	no data available
Dynamic viscosity	no data available
Solubilities	water : freely soluble . Ethanol : soluble .
n-Octanol/water partition coefficient:(log Pow)	no data available
Vapour pressure	no data available
Specific Gravity / Relative density	1.138
Vapour density	no data available
Particle characteristics	no data available

Section 10: STABILITY AND REACTIVITY

Stability

Reactivity	no data available
Chemical stability	Stable under recommended storage conditions.

Hazardous reactions

Corrodes metals to generate hydrogen gas.

Conditions to avoid

Extremes of temperature and direct sunlight, Heat, flames and sparks, static electricity, spark

Incompatible materials

Strong oxidizing agents

Hazardous decomposition products

Carbon monooxide (CO), Carbon dioxide (CO2), Nitrogen oxides (NOx), Halides, Sulfur oxides (SOx)

Section 11: TOXICOLOGICAL INFORMATION

*NITE: National Institute of Technology and Evaluation (JAPAN)
https://www.chem-info.nite.go.jp/en/chem/chrip/chrip_search/srhInput

Acute toxicity

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Formamide	3200 mg/kg (Rat)	> 13500 mg/kg (Rat)	> 21 mg/L (Rat) 4 h
Sodium Dodecyl Sulfate	1,200 mg/kg (Rat)	200 mg/kg (Rabbit)	> 3900 mg/m³ (Rat) 1 h
Ethylenediaminetetraacetic acid disodium salt	2 g/kg (Rat)	N/A	N/A

Chemical Name	Acute toxicity -oral- source information	Acute toxicity -dermal- source information	Acute toxicity -inhalation gas- source information
Formamide	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Sodium Dodecyl Sulfate	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.

Chemical Name	Acute toxicity -inhalation vapor- source information	Acute toxicity -inhalation dust- source information	Acute toxicity -inhalation mist- source information
Formamide	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Sodium Dodecyl Sulfate	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.

Skin irritation/corrosion

Chemical Name	Skin corrosion/irritation source information
Formamide	Based on the NITE GHS classification results.
Sodium Dodecyl Sulfate	Based on the NITE GHS classification results.

Serious eye damage/ irritation

Chemical Name	Serious eye damage/irritation source information
Formamide	Based on the NITE GHS classification results.
Sodium Dodecyl Sulfate	Based on the NITE GHS classification results.

Respiratory or skin sensitization

Chemical Name	Respiratory or Skin sensitization source information
Formamide	Based on the NITE GHS classification results.
Sodium Dodecyl Sulfate	Based on the NITE GHS classification results.

Reproductive cell mutagenicity

Chemical Name	germ cell mutagencity source information
Formamide	Based on the NITE GHS classification results.
Sodium Dodecyl Sulfate	Based on the NITE GHS classification results.

Carcinogenicity

Chemical Name	Carcinogenicity source information
Formamide	Based on the NITE GHS classification results.
Sodium Dodecyl Sulfate	Based on the NITE GHS classification results.

Chemical Name	NTP	IARC	ACGIH	JSOH
Formamide 75-12-7	N/A	N/A	A3	N/A

Reproductive toxicity

Chemical Name	Reproductive toxicity source information
Formamide	Based on the NITE GHS classification results.
Sodium Dodecyl Sulfate	Based on the NITE GHS classification results.

STOT-single exposure

Chemical Name	STOT -single exposure- source information
Formamide	Based on the NITE GHS classification results.
Sodium Dodecyl Sulfate	Based on the NITE GHS classification results.

STOT-repeated exposure

Chemical Name	STOT -repeated exposure- source information
Formamide	Based on the NITE GHS classification results.
Sodium Dodecyl Sulfate	Based on the NITE GHS classification results.

Aspiration hazard

Chemical Name	Aspiration Hazard source information
Formamide	Based on the NITE GHS classification results.
Sodium Dodecyl Sulfate	Based on the NITE GHS classification results.

Section 12: ECOLOGICAL INFORMATION

*NITE: National Institute of Technology and Evaluation (JAPAN)
https://www.chem-info.nite.go.jp/en/chem/chrip/chrip_search/srhInput

Ecotoxicity

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Formamide	*ErC50 : Pseudokirchneriella subcapitata*	*LC50 : Oryzias latipes > 100 mg/L 96 h*	*EC50 : Daphnia magna > 500 mg/L 48 h*

	> 1000 mg/L 72 h		
Sodium Dodecyl Sulfate	*EC50:Desmodesmus subspicatus 53 mg/L 72 h*	*LC50:Oncorhynchus mykiss 4.3 - 8.5 mg/L 96 h*	*LC50 : Acartia tonsa 0.12 mg/L 96 h*
Ethylenediaminetetraacetic acid disodium salt	*N/A*	*LC50 : Poecilia reticulata 320 mg/L 96 h*	*N/A*

Other data

Chemical Name	Short-term (acute) hazardous to the aquatic environment source information	Long-term (chronic) hazardous to the aquatic environment source information
Formamide	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Sodium Dodecyl Sulfate	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.

Persistence and degradability No information available
Bioaccumulative potential No information available
Mobility in soil No information available
Hazard to the ozone layer No information available

Section 13: DISPOSAL CONSIDERATIONS

Waste from residues
Disposal should be in accordance with applicable regional, national and local laws and regulations.
Contaminated container and contaminated packaging
Disposal should be in accordance with applicable regional, national and local laws and regulations.

Section 14: TRANSPORT INFORMATION

ADR/RID
UN number UN1760
Proper shipping name: Corrosive liquid, n.o.s. (Formamide Mixture)
UN classfication 8
Subsidiary hazard class
Packing group III
Marine pollutant Not applicable

IMDG
UN number UN1760
Proper shipping name: Corrosive liquid, n.o.s. (Formamide Mixture)
UN classfication 8
Subsidiary hazard class
Packing group III
Marine pollutant (Sea) Not applicable
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code No information available

IATA
UN number UN1760
Proper shipping name: Corrosive liquid, n.o.s. (Formamide Mixture)
UN classfication 8
Subsidiary hazard class
Packing group III
Environmentally Hazardous Substance Not applicable

Section 15: REGULATORY INFORMATION

Japanese regulations

Fire Service Act	Category IV, Class III petroleums, dangerous grade 3 water-soluble
Poisonous and Deleterious Substances Control Law	Not applicable
Industrial Safety and Health Act	Harmful Substances Whose Names Are to be Indicated on the Label (Law Art.57) Notifiable Substances (Law Art.57-2) Chemical Substances Hazardous to Skin, etc.(Regulations Article 594-2 Paragraph 1)
Regulations for the carriage and storage of dangerous goods in ship	Corrosive Substances (Ordinance Art.3, Ministry of Transportation Ordinance Regarding Transport by Ship and Storage, Attached Table 1)
Civil Aeronautics Law	Corrosive Substances (Ordinance Art.194, MITL Nortification for Air Transportation of Explosives etc., Attached Table 1)
Marine Pollution Prevention Law	Enforcement ordinance Appendix No. 1 Noxious liquid substance Category Y
Pollutant Release and Transfer Register Law (2023.4.1-)	Class 2
Class 2 - No.	815

Chemical Name	Poisonous and Deleterious Substances Control Law	Industrial Safety and Health Act Substances (Law Art.57-2)	Pollutant Release and Transfer Register Law (2023.4.1-)
Formamide 75-12-7 (95)	-	Applicable	Applicable

Section 16: OTHER INFORMATION

Key literature references and sources for data etc.

NITE: National Institute of Technology and Evaluation (JAPAN)
https://www.chem-info.nite.go.jp/en/chem/chrip/chrip_search/srhInput
IATA dangerous Goods Regulations
RTECS:Registry of Toxic Effects of Chemical Substances
Japan Industrial Safety and Health Association GHS Model SDS
Dictionary of Synthetic Oraganic Chemistry , SSOCJ, Koudansha Scientific Co.Ltd.
Chemical Dictionary, Kyouritsu Publishing Co., Ltd.
etc

Record of SDS revisions

The following contents were revised. Hazards identification. Composition/information on ingredients. Physical and chemical properties. Stability and reactivity. Toxicological information. Transport information. Regulatory information.

Disclaimer

This SDS is according to JIS Z 7253: 2019. The information provided in this Safety Data Sheet 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 guidance for safe handling, and is not to be considered 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 materials or in any process, unless specified in the text.
GHS Classification is according to JIS Z 7252:2019. *JIS: Japanese Industrial Standards

End of Safety Data Sheet