

SAFETY DATA SHEET

According to JIS Z 7253:2019
Issue Date 25-Feb-2025
Revision Number 4.120001

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name	Wetting Tension Test Mixture No.38.0
Product Code	234-01901

Supplier FUJIFILM Wako Pure Chemical Corporation
 1-2 Doshomachi 3-Chome, Chuo-ku, Osaka 540-8605, Japan
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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

Flammable liquids

Category 3

Corrosive to metals

Category 1

Serious eye damage/eye irritation

Category 2B

Carcinogenicity

Category 2

Reproductive Toxicity

Category 1B

Specific target organ toxicity (single exposure)

Category 1, Category 3

Category 1 central nervous system, blood system, kidneys, liver

Category 3 Narcotic effects

Specific target organ toxicity (repeated exposure)

Category 1

Category 1 blood system, testes

Pictograms



Signal word

Danger

Hazard statements

H226 - Flammable liquid and vapour

H290 - May be corrosive to metals

H320 - Causes eye irritation

H351 - Suspected of causing cancer

H360 - May damage fertility or the unborn child

H336 - May cause drowsiness or dizziness

H370 - Causes damage to the following organs: central nervous system, blood system, kidneys, liver

H372 - Causes damage to the following organs through prolonged or repeated exposure: blood system, testes

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

- Wash face, hands and any exposed skin thoroughly after handling
- Do not breathe dust/fume/gas/mist/vapors/spray
- Do not eat, drink or smoke when using this product
- Use only outdoors or in a well-ventilated area
- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
- Keep container tightly closed
- Ground/bond container and receiving equipment
- Use explosion-proof electrical/ ventilating / lighting / equipment
- Use only non-sparking tools
- Take precautionary measures against static discharge
- Keep only in original container
- Keep cool

Precautionary statements-(Response)

- IF exposed: Call a POISON CENTER or doctor/physician
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- If eye irritation persists: Get medical advice/attention
- IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
- Call a POISON CENTER or doctor/physician if you feel unwell
- In case of fire: Use suitable extinguishing media for extinction
- 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	58.9	45.04	(2)-684,(2)-681	*	75-12-7
2-Ethoxyethanol	41.1	90.12	(2)-2424,(2)-411,(7)-97	*	110-80-5
COLORANT	<0.10	N/A	N/A	N/A	N/A-23-0190-3

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

Substances Remarks: This Product includes the following componets. COLORANT ; < 0.10 %

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. Vapors may form explosive mixtures with air

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 contaminant and methods and materials for cleaning up

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

Recovery, 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. Avoid contact with metal. 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

Keep container protect from light, store in well-ventilated place at room temperature (preferably cool). Keep container tightly closed.

Safe packaging material

Glass

Incompatible substances

Strong oxidizing agents, Metals

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
2-Ethoxyethanol 110-80-5	TWA: 5 ppm OEL TWA: 18 mg/m ³ OEL Skin ISHL/ACL: 5 ppm	ISHL/ACL: 5 ppm	TWA: 5 ppm Skin

Personal protective equipment

Respiratory protection gas mask for organic gas (JIS T 8152)
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

Form

Color

Blue

Appearance

liquid

Odor

characteristic odor

Melting point/freezing point

no data available

Boiling point, initial boiling point and boiling range

no data available

Flammability

Flammable liquid and vapor

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

42 - 60 °C

Auto-ignition temperature:

no data available

Decomposition temperature:

no data available

pH

no data available

Viscosity (coefficient of viscosity)

no data available

Dynamic viscosity

no data available

Solubilities

water : Very soluble .

n-Octanol/water partition coefficient:(log Pow)

no data available

Vapour pressure

no data available

Specific Gravity / Relative density

no data available

Vapour density

no data available

Particle characteristics

no data available

Section 10: STABILITY AND REACTIVITY

Stability

Reactivity

no data available

Chemical stability

May be altered by light.

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, Metals

Hazardous decomposition productsCarbon monoxide (CO), Carbon dioxide (CO₂), Nitrogen oxides (NO_x)**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
2-Ethoxyethanol	2125 - 5720 mg/kg (Rat)	3900 mg/kg (Rat)	4119 ppm (Rat) 4 h

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.
2-Ethoxyethanol	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.
2-Ethoxyethanol	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.
2-Ethoxyethanol	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.
2-Ethoxyethanol	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.
2-Ethoxyethanol	Based on the NITE GHS classification results.

Reproductive cell mutagenicity

Chemical Name	germ cell mutagenicity source information
Formamide	Based on the NITE GHS classification results.
2-Ethoxyethanol	Based on the NITE GHS classification results.

Carcinogenicity

Chemical Name	Carcinogenicity source information
Formamide	Based on the NITE GHS classification results.
2-Ethoxyethanol	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.
2-Ethoxyethanol	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.
2-Ethoxyethanol	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.
2-Ethoxyethanol	Based on the NITE GHS classification results.

Aspiration hazard

Chemical Name	Aspiration Hazard source information
Formamide	Based on the NITE GHS classification results.
2-Ethoxyethanol	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 : <i>Pseudokirchneriella subcapitata</i> > 1000 mg/L 72 h	LC50 : <i>Oryzias latipes</i> > 100 mg/L 96 h	EC50 : <i>Daphnia magna</i> > 500 mg/L 48 h
2-Ethoxyethanol	EC50 : <i>Pseudokirchneriella subcapitata</i> > 100 mg/L 72 h	LC50 : Killifish > 94.7 mg/L 96 h	EC50 : <i>Daphnia magna</i> 89.5 mg/L 48 h

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.
2-Ethoxyethanol	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 UN2924
Proper shipping name: Flammable liquid, corrosive, n.o.s. (2-Ethoxyethanol and Formamide Mixture)
UN classification 3
Subsidiary hazard class 8
Packing group III
Marine pollutant Not applicable

IMDG

UN number UN2924
Proper shipping name: Flammable liquid, corrosive, n.o.s. (2-Ethoxyethanol and Formamide Mixture)
UN classification 3
Subsidiary hazard class 8
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 UN2924
Proper shipping name: Flammable liquid, corrosive, n.o.s. (2-Ethoxyethanol and Formamide Mixture)
UN classification 3
Subsidiary hazard class 8
Packing group III
Environmentally Hazardous Substance Not applicable

Section 15: REGULATORY INFORMATION

Japanese regulations

Fire Service Act Category IV, Class II petroleum, 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)
 Class 2 Organic Solvents (Enforcement Order Attached Table No.6-2, Ordinance on Prevention of Organic Solvent Poisoning Art.1, Para.1, Item 5)
 Working Environment Evaluation Standards, Administrative Control Levels (Law Art.65-2, Para.1)
 Dangerous Substances - Flammable Substance (Enforcement Order Attached Table 1 Item 4)
 Chemical Substances Hazardous to Skin, etc.(Regulations Article 594-2 Paragraph 1)
Regulations for the carriage and storage of dangerous goods in ship Flammable Liquids (Ordinance Art.3, Ministry of Transportation Ordinance Regarding Transport by Ship and Storage, Attached Table 1)
Civil Aeronautics Law Flammable Liquids (Ordinance Art.194, MITL Notification 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 1
 Class 2
Class 1 - No. 57
Class 2 - No. 815
Air Pollution Control Law Hazardous Air Pollutants

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 (58.9)	-	Applicable	Applicable
2-Ethoxyethanol 110-80-5 (41.1)	-	Applicable	Applicable

Section 16: OTHER INFORMATION

Key literature references and NITE: National Institute of Technology and Evaluation (JAPAN)

sources for data etc.

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 Organic 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. Handling and storage. Stability and reactivity. 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