Safety Data Sheet

Section 1. Identification of the substance/mixture and of the company/undertaking

Product identifier:

Product name: Wetting tension test mixture 31.0mN/m

Reference number(SDS):55015jis_J_E1-1

Product type:

Reagent

Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses of the product: Wetting tension test(JIS K6768:1999)

Uses advised against: Do not use for other purposes.

Details of the supplier of the safety data sheet

Manufacturer/Supplier: JUNSEI CHEMICAL CO., LTD.
Address: 1-6, Ohmano-cho, Koshigaya-shi, Saitama 343-0844, Japan
Division: Quality Assurance Department
Telephone number: +81-48-986-6161
FAX: +81-48-989-2787
e-mail address: shiyaku-t@junsei.co.jp

Section 2. Hazards identification

GHS classification and label elements of the product

Classification of the substance or mixture

PHYSICAL AND CHEMICAL HAZARDS

Flammable liquids: Category 3

HEALTH HAZARDS

Acute toxicity (Inhalation): Category 4

Serious eye damage/eye irritation: Category 2B

Carcinogenicity: Category 2

Reproductive toxicity: Category 1B

Specific target organ toxicity - single exposure: Category 1 (central nervous system, blood system, kidney, liver)

Specific target organ toxicity - repeated exposure: Category 1 (blood system, testis)

(Note) GHS classification without description: Not classified/Classification not possible

Label elements

Signal word: Danger

HAZARD STATEMENT

H226-Flammable liquid and vapor

H332-Harmful if inhaled

H320-Causes eye irritation

H351-Suspected of causing cancer

H360-May damage fertility or the unborn child

H370-Causes damage to organs (central nervous system, blood system, kidney, liver)

H372-Causes damage to organs through prolonged or repeated exposure (blood system, testis)

PRECAUTIONARY STATEMENT

Prevention

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Keep container tightly closed.
Ground and bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting equipment.
Use non-sparking tools.
Take action to prevent static discharges.
Do not breathe vapors.
Use only outdoors or in a well-ventilated area.
Wash contaminated parts thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.
Do not eat, drink or smoke when using this product.

Response

In case of fire: Use water mist, alcohol-resistant foam, dry powder, CO2 to extinguish.
Get medical advice/attention if you feel unwell.
IF exposed or concerned: Get medical advice/attention.
Call a POISON CENTER/doctor/physician if you feel unwell.
IF exposed or concerned: Call a POISON CENTER/doctor/physician.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
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.

Storage

Store in a well-ventilated place. Keep cool.
Store locked up.

Disposal

Dispose of contents/container in accordance with local/national regulation.

Specific Physical and Chemical hazards

Flammable liquid. Vapor/air mixture may explode.

Section 3. Composition/information on ingredients

Mixture/Substance selection:

Mixture

Common name, synonyms: Wettability standard solution No.31

Ingredient name:Ethylene glycol monoethyl ether
Content (%):97.0
Chemical formula:C4H10O2
ENCS: 2-411;2-2424; 7-97
CAS No.:110-80-5
MW:90.12
EC No.:203-804-1

Ingredient name:Formamide
Content (%):3.0
Chemical formula:CH3NO
ENCS:2-681
CAS No.:75-12-7
MW:45.04
EC No.:200-842-0

Colorant(Victoria Pure Blue BO):ca. 0.03%

Note : The figures shown above are not the specifications of the product.

Components contributing to the hazard

Toxic for reproduction (Article 57c) in REACH SVHC candidate list

Ethylene glycol monoethyl ether; Formamide

Section 4. First-aid measures

Descriptions of first-aid measures

General measures

Get medical advice/attention if you feel unwell.

Keep victim warm and quiet.

Call emergency medical service.

IF INHALED

Remove person to fresh air and keep comfortable for breathing.

Give artificial respiration if victim is not breathing.

Administer oxygen if breathing is difficult.

Call a POISON CENTER/doctor/physician if you feel unwell.

IF ON SKIN (or hair)

Take off immediately all contaminated clothing. Rinse skin with water or shower.

In case of burns, immediately cool affected skin for as long as possible with cold water.

Do not remove clothing if adhering to skin.

If skin irritation or rash occurs: Get medical advice/attention.

Remove and isolate contaminated clothing and shoes.

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 SWALLOWED

Rinse mouth.

Call a POISON CENTER/doctor/physician if you feel unwell.

Most important symptoms and effects, both acute and delayed

Specific information on symptom and effect are unknown.

Indication of any immediate medical attention and special treatment needed

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

In case of fire, use water mist, alcohol-resistant foam, dry powder, CO2 to extinguish.

Unsuitable extinguishing media

Unsuitable extinguishing media data is not available.

Specific hazards arising from the substance or mixture

Containers may explode when heated.

Fire may produce irritating, corrosive and/or toxic gases.

Runoff from fire control or dilution water may cause pollution.

Advice for firefighters

Specific fire-fighting measures

Evacuate non-essential personnel to safe area.

Cool container with water spray.

Special protective equipment and precautions for fire-fighters

Wear fire resistant or flame retardant clothing.

Wear protective gloves/protective clothing/eye protection/face protection.

Firefighters should wear self-contained breathing apparatus with a full facepiece operated

in the positive pressure mode.

Section 6. Accidental release measures

Personnel precautions, protective equipment and emergency procedures

Keep unauthorized personnel away.
In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
Ventilate area until material pick up is complete.
Wear proper protective equipment.
PUBLIC SAFTY: Ventilate closed spaces before entering.
Do not touch or walk through spilled material.

Environmental precautions

Runoff to sewer may create fire or explosion hazard.
Vapors may form explosive mixtures with air.
Avoid release to headsprings, rivers, lakes, ocean and groundwater.

Methods and materials for containment and cleaning up

Absorb spill with inert material (dry sand, earth, et al), then place in a chemical waste container.
Use clean non-sparking tools to collect absorbed material.
All equipment used when handling the product must be grounded.

Preventive measures for secondary accident

Collect spillage.
Stop leak if you can do it without risk.
ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
Prevent entry into waterways, sewers, basements or confined areas.
Keep out of low areas.

Section 7. Handling and storage

Precautions for safe handling

Preventive measures

(Exposure Control for handling personnel)

Do not breathe vapors.

(Protective measures against fire and explosion)

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Ground and bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting equipment.
Use non-sparking tools.
Take action to prevent static discharges.

(Exhaust/ventilator)

Exhaust/ventilator should be available.

(Safety treatments)

Avoid contact with skin.
Avoid contact with eyes.

Safety Measures

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.
Use personal protective equipment as required.
When using do not eat, drink or smoke.

Any incompatibilities

Strong oxidizing agents should not be mixed with the chemicals.

Advice on general occupational hygiene

Wash contaminated parts thoroughly after handling.

Do not eat, drink or smoke when using this product.

Storage

Conditions for safe storage

Store in a well-ventilated place. Keep container tightly closed.

Keep cool. Protect from sunlight.

Store in accordance with local/national regulation.

Store locked up.

Container and packaging materials for safe handling

Keep only in original packaging.

Specific end use(s)

See information in Section 7.1 and 7.2 for handling and storage recommendations. See Section 8 for exposure controls and personal protection recommendations.

Section 8. Exposure controls/personal protection

Control parameters

Control value and Concentration standard value

(Ethylene glycol monoethyl ether)

Japan control value　5ppm

Adopted value

(Ethylene glycol monoethyl ether)

JSOH(1985) 5ppm; 18mg/m3 (skin)

ACGIH(2003) TWA: 5ppm (Male repro dam; embryo/fetal dam)

(Formamide)

Adopted value in JSOH is not available.

ACGIH(2020) TWA: 1ppm (Hematological eff; liver cancer; developmental toxicity)

[ACGIH] Notation

(Ethylene glycol monoethyl ether)

Skin

(Formamide)

Skin

Exposure controls

Appropriate engineering controls

Do not use in areas without adequate ventilation.

Eye wash station should be available.

Washing facilities should be available.

Individual protection measures

Respiratory protection

Select and wear respiratory protection in accordance with approved standards (e.g. JIS T8150).

Recommended respiratory protection : Gas mask

Hand protection

Wear protective gloves. Recommended material(s): butyl rubber

Inspect before use and replace worn or damaged gloves.

Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions.

Chemical-resistant, impervious gloves complying with an approved standard (e.g. JIS T8116) should be used.

Eye protection

Wear eye/face protection in accordance with approved standards (e.g. JIS T8147).

Skin and body protection

Wear impervious clothing and boots in case of repeated or prolonged treatment.

Personal protective equipment for the body and skin should be selected based on the task

being performed and the risks involved.

Section 9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state: Liquid
Color: Blue
Odor: Characteristic odor
Odor threshold data is not available.
Melting point/Freezing point data is not available.
Boiling point or initial boiling point: (Ethylene glycol monoethyl ethe)135℃
Boiling range data is not available.
Flammability (gases, liquids and solids) data is not available.
Lower and upper explosion limit/flammability limit data is not available.
Flash point: (Ethylene glycol monoethyl ether)44℃(C.C)
Auto-ignition temperature: (Ethylene glycol monoethyl ether)235℃
Decomposition temperature data is not available.
Self-Accelerating Decomposition Temperature/SADT data is not available.
pH data is not available.
Dynamic viscosity data is not available.
Kinematic viscosity data is not available.
Solubility:
Solubility in water: Miscible
Solubility in solvent data is not available.
n-Octanol/water partition coefficient data is not available.
Vapor pressure data is not available.
Density and/or relative density data is not available.
Relative vapor density (Air=1) data is not available.
Relative density of the Vapor/air - mixture at 20℃ (Air = 1) data is not available.
Particle characteristics data is not available.

Other information

Critical temperature data is not available.
Evaporation rate data is not available.
VOC data is not available.

Section 10. Stability and Reactivity

Reactivity

Reactivity data is not available.

Chemical stability

Stable under normal storage/handling conditions.

Possibility of hazardous reactions

Reacts with strong oxidants. This generates fire and explosion hazard.
Attacks many plastics and rubber

Conditions to avoid

Contact with incompatible materials.
Open flames. Heating.

Incompatible materials

Strong oxidizing agents

Hazardous decomposition products

Carbon oxides, Nitrogen oxides

Section 11. Toxicological Information

The product has not been subjected to toxicological testing. Refer to the available data on the constituents.

Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

[NITE-CHRIP]

(Ethylene glycol monoethyl ether)

rat LD50: 2125 - 5720 mg/kg (source: NITE)

(Formamide)

rat LD50: 3200 mg/kg (source: NITE)

Acute toxicity (Dermal)

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

[NITE-CHRIP]

(Ethylene glycol monoethyl ether)

rabbit LD50: 3311 - 15200 mg/kg (source: NITE)

(Formamide)

rabbit LD50: > 6000 mg/kg (source: NITE)

Acute toxicity (Inhalation)

[Product]

Category 4, Harmful if inhaled

[Data for components of the product]

[NITE-CHRIP]

(Ethylene glycol monoethyl ether)

vapor: rat LC50: 15.2 mg/L (4-hour) (source: NITE)

(Formamide)

mist: rat LC50: > 3900 ppm (6-hour) (converted 4-hour equivalent value: > 10.8 mg/L)

(source: NITE)

Irritant properties

Skin corrosion/irritation

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

Serious eye damage/irritation

[Product]

Category 2B, Causes eye irritation

[Data for components of the product]

[NITE-CHRIP]

(Ethylene glycol monoethyl ether)

Category 2B (source: NITE)

Sensitization

Respiratory sensitization

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

Skin sensitization
[Product]
Classification not possible (Insufficient data available or no data available).
[Data for components of the product]
No data available.

Germ cell mutagenicity
[Product]
Classification not possible (Insufficient data available or no data available).
[Data for components of the product]
No data available.

Carcinogenicity
[Product]
Category 2, Suspected of causing cancer
[Data for components of the product]
[NITE-CHRIP]
(Formamide)
Category 2 (source: NITE)
[ACGIH]
(Formamide)
A3(2020) : Confirmed Animal Carcinogen with Unknown Relevance to Humans

Reproductive toxicity
[Product]
Category 1B, May damage fertility or the unborn child
[Data for components of the product]
[NITE-CHRIP]
(Ethylene glycol monoethyl ether)
Category 1B (source: NITE)
(Formamide)
Category 1B (source: NITE)

Specific target organ toxicity (STOT)
STOT-single exposure
[Product]
Category 1, Causes damage to organs
[Data for components of the product]
[NITE-CHRIP]
(Ethylene glycol monoethyl ether)
Category 1 (blood system, liver, central nervous system, kidneys) (source: NITE)
(Formamide)
Category 3 (Narcotic effects) (source: NITE)

STOT-repeated exposure
[Product]
Category 1, Causes damage to organs through prolonged or repeated exposure
[Data for components of the product]
[NITE-CHRIP]
(Ethylene glycol monoethyl ether)
Category 1 (blood system, testis) (source: NITE)
(Formamide)
Category 2 (male genitalia) (source: NITE)

Aspiration hazard
[Product]
Classification not possible (Insufficient data available or no data available).
[Data for components of the product]
No data available.

Section 12. Ecological Information

The product has not been subjected to ecotoxicological testing. Refer to the available data on the constituents.

Ecotoxicity

Aquatic toxicity

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

Hazardous to the aquatic environment, short-term (acute)

[NITE-CHRIP]

(Ethylene glycol monoethyl ether)

Algae (Pseudokirchneriella subcapitata) 72-hour ErC50: > 100 mg/L (source: NITE)

Crustacea (Daphnia magna) 48-hour EC50: > 89.5 mg/L (source: NITE)

Fish (Oryzias latipes) 96-hour LC50: > 94.7 mg/L (source: NITE)

(Formamide)

Algae (Pseudokirchneriella subcapitata) 72-hour ErC50: > 1000 mg/L (source: NITE)

Crustacea (Daphnia magna) 48-hour EC50: > 500 mg/L (source: NITE)

Fish (Oryzias latipes) 96-hour LC50: > 100 mg/L (source: NITE)

Hazardous to the aquatic environment, long-term (chronic)

[NITE-CHRIP]

(Ethylene glycol monoethyl ether)

Algae (Pseudokirchneriella subcapitata) 72-hour NOEC (growth rate): 100 mg/L (source: NITE)

Crustacea (Daphnia magna) 21-day NOEC: > 97 mg/L (source: NITE)

(Formamide)

Algae (Pseudokirchneriella subcapitata) 72-hour NOEC: > 10 mg/L (source: NITE)

Water solubility

[Data for components of the product]

(Ethylene glycol monoethyl ether)

1000 g/L (source: NITE)

(Formamide)

not poorly water-soluble (100 g/L) (source: NITE)

Persistence and degradability

[Data for components of the product]

(Ethylene glycol monoethyl ether)

Rapidly degradable (Degradation rate: 63, 83, 83% (by BOD)) (source: NITE)

(Formamide)

Rapidly degradable (Degradation rate: 99% (by BOD)) (OECD TG 301A, GLP) (source: NITE)

Bioaccumulative potential

[Data for components of the product]

(Ethylene glycol monoethyl ether)

log Pow: -0.540 (source: ICSC, 2024)

(Formamide)

log Pow: -1.51 (source: ICSC, 2013)

Mobility in soil

Mobility in soil data is not available.

Other adverse effects

Ozone depleting chemical data is not available.

Section 13. Disposal considerations

Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging

Waste treatment methods

Dispose of contents/container in accordance with local/national regulation.

Section 14. Transport Information

UN No., UN CLASS

UN Number or ID Number : 1993
UN Proper Shipping Name : FLAMMABLE LIQUID, N.O.S.
Class or division (Transport hazard class) : 3
Packing group : III
ERG GUIDE No.: 128

IMDG Code (International Maritime Dangerous Goods Regulations)

UN Number or ID Number : 1993
UN Proper Shipping Name : FLAMMABLE LIQUID, N.O.S.
Class or division (Transport hazard class) : 3
Packing group : III

IATA (Dangerous Goods Regulations)

UN Number or ID Number : 1993
UN Proper Shipping Name : FLAMMABLE LIQUID, N.O.S.
Class or division (Transport hazard class) : 3
Hazard labels : Flamm.liquid
Packing group : III

Environmental hazards

Marine pollutants (yes/no) : no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Noxious Liquid Substances ; Cat. Y
Formamide

MARPOL Annex V - HME (Harmful to the Marine Environment)

Reproductive toxicity: cat.1, 1A, 1B
Ethylene glycol monoethyl ether; Formamide
Specific target organ toxicity - repeated exposure: cat.1
Ethylene glycol monoethyl ether

Section 15. Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture

List of substances subject to authorisation (REACH, Annex XIV)/SVHC - candidate list

Toxic for reproduction (Article 57c)

Ethylene glycol monoethyl ether; Formamide

U.S. Toxic Substances Control Act (TSCA) Inventory

Chemicals listed in TSCA Inventory

75-12-7; 110-80-5

Superfund Amendments and Reauthorizations Act (SARA), Title III

SARA 313 (TRI)

Ethylene glycol monoethyl ether; Formamide

Other regulatory information

We are not able to check up the regulatory information with regard to the substances in your country or region, therefore, we request this matter would be filled by your responsibility.

Regulatory information with regard to this substance in your country or in your region

Wetting tension test mixture 31.0mN/m,
JUNSEI CHEMICAL CO., LTD.,55015jis_J_E1-1,21/Nov/2024

should be examined by your own responsibility.
Ensure this material in compliance with federal requirements and ensure conformity to local regulations.
Regulatory information in this section are limited to intentional ingredient(s), but does not contain information on non-intentional ingredients or impurities which are not informed by supplier(s).

Chemical safety assessment

Advice on safe handling for this product can be found in sections 7 and 8 of this SDS.

Section 16. Other information

GHS classification and labelling

H226-Flammable liquids, Category 3: H226 Flammable liquid and vapour
H332-Acute toxicity, Category 4: H332 Harmful if inhaled
H320-Serious eye damage/eye irritation, Category 2B: H320 Causes eye irritation
H351-Carcinogenicity, Category 2: H351 Suspected of causing cancer
H360-Reproductive toxicity, Category 1B: H360 May damage fertility or the unborn child
H370-STOT - single exposure, Category 1: H370 Causes damage to organs
H372-STOT - Repeated exposure, Category 1: H372 Causes damage to organs through prolonged or repeated exposure

References and sources for data

Globally Harmonized System of classification and labelling of chemicals, UN
Recommendations on the TRANSPORT OF DANGEROUS GOODS 22nd edit., 2021 UN
IMDG Code, 2022 Edition (Incorporating Amendment 41-22)
IATA Dangerous Goods Regulations (65th Edition) 2024
2020 EMERGENCY RESPONSE GUIDEBOOK (US DOT)
2024 TLVs and BEIs. (ACGIH)
JIS Z 7252 : 2019
JIS Z 7253 : 2019
2023 Recommendation on TLVs (JSOH)
Notification No. 0111-1 (January 11, 2022), Chemical Hazards Control Division, Industrial Safety and Health Department, Labour Standards Bureau, MHLW in Japan
Supplier's data/information
Chemicals safety data management system "GHS Assistant" Version 4.31 (https://www.asahi-ghs.com/)
NITE Chemical Risk Information Platform "NITE-CHRIP"
(https://www.chem-info.nite.go.jp/chem/chrip/chrip_search/systemTop)
GHS Classification Guidance for Enterprises 2019 Revised Edition (Ver. 2.1) (May. 2024, METI)

Abbreviations and acronyms

SDS (Safety Data Sheet)
LD50 (Lethal Dose, 50%)
LC50 (Lethal Concentration, 50%)
IARC (International Agency for Research on Cancer)
ACGIH (American Conference of Governmental Industrial Hygienists)
EPA (US Environmental Protection Agency)
NTP (US National Toxicology Program)
METI (Ministry of Economy, Trade and Industry in Japan)
MHLW (Ministry of Health, Labour and Welfare in Japan)
MOE (Ministry of the Environment in Japan)
JSOH (Japan Society for Occupational Health)
ISHA (Industrial Safety and Health Act in Japan)
CSCL (Chemical Substances Control Law in Japan)
EU (European Union)
EC50 (Effective Concentration, 50%)
NOEC (No Observed Effect Concentration)

BOD (Biochemical Oxygen Demand)
COD (Chemical Oxygen Demand)
BCF (Bioconcentration Factor)
anh (anhydride)

General Disclaimer

This data sheet was created based on the information we currently have and may be revised according to new information. In addition, the precautions apply only to normal handling, and in the case of special handling, please make adequate countermeasure to maintain your safety.

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.

The GHS classification data given here is based on current Data published in Japan (National Institute of Technology and Evaluation (NITE) Chemical Risk Information Platform (NITE-CHRIP), up to FY2023).