



## Safety Data Sheet

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

#### Product identifier:

Product name: Vinyl acetate, monomer/ Vinyl acetate

SDS No. : 8442E-2

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

Research and Development

#### Details of the supplier of the safety data sheet

Manufacturer/Supplier: KISHIDA CHEMICAL CO., LTD.

Address: 3-1, Honmachibashi, Chuo-ku, Osaka, JAPAN

Division: Chemical Safety Management Department

Telephone number: +81-6-6946-8061

FAX: +81-6-6946-1607

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### 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 2

Self-reactive substances and mixtures: Type G

##### HEALTH HAZARDS

Acute toxicity (Inhalation): Category 4

Skin corrosion/irritation: Category 2

Serious eye damage/eye irritation: Category 2

Germ cell mutagenicity: Category 2

Carcinogenicity: Category 1B

Specific target organ toxicity – single exposure: Category 3 (Respiratory tract irritation)

Specific target organ toxicity – single exposure: Category 3 (Narcotic effects)

Specific target organ toxicity – repeated exposure: Category 2 (respiratory system)

##### ENVIRONMENT HAZARDS

Hazardous to the aquatic environment, short-term (acute): Category 2

Hazardous to the aquatic environment, long-term (chronic): Category 3

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

#### Label elements



Signal word: Danger

#### HAZARD STATEMENT

Highly flammable liquid and vapor

Harmful if inhaled

Causes skin irritation

Causes serious eye irritation

Suspected of causing genetic defects

May cause cancer

May cause respiratory irritation

May cause drowsiness or dizziness

May cause damage to organs through prolonged or repeated exposure (respiratory system)



Toxic to aquatic life

Harmful to aquatic life with long lasting effects

#### PRECAUTIONARY STATEMENT

##### Prevention

Avoid release to the environment.

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 dust/fume/gas/mist/vapors/spray.

Use only outdoors or in a well-ventilated area.

Wash contaminated parts thoroughly after handling.

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

##### Response

In case of fire: Use appropriate media to extinguish.

Get medical advice/attention if you feel unwell.

IF exposed or concerned: Get medical advice/attention.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF ON SKIN: Wash with plenty of soap and water.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

If skin irritation occurs: Get medical advice/attention.

Take off contaminated clothing and wash it before reuse.

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 container tightly closed. Keep cool.

##### Disposal

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

#### Specific Physical and Chemical hazards

Highly flammable liquid. Vapor/air mixture may explode.

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### Section 3. Composition/information on ingredients

#### Mixture/Substance selection:

##### Substance

Ingredient name:Vinyl acetate

Content (%):99(min)

Chemical formula:CH<sub>3</sub>COOCH:CH<sub>2</sub>

Chemicals No, Japan:2-728

CAS No.:108-05-4

MW:86.09

ECNO:203-545-4

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

#### Stabilizing additives

Hydroquinone (CAS No.123-31-9)



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## Section 4. First-aid measures

### Descriptions of first-aid measures

#### General measures

Get medical advice/attention if you feel unwell.

#### IF INHALED

Remove person to fresh air and keep comfortable for breathing.

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.

Wash with plenty of soap and water.

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

#### 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.

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## Section 5. Fire-fighting measures

### Extinguishing media

#### Suitable extinguishing media

In case of fire, use foam, dry powder, CO2 to extinguish.

#### Unsuitable extinguishing media

Indoor firefighting equipment or outdoor firefighting equipment

Sprinkler equipment

Dry-powder firefighting equipment – other (except for phosphate etc.,hydrogen carbonate etc.)

Straight stream water extinguisher

Water mist extinguisher

Reinforcing liquid jet extinguisher

Dry-powder extinguisher – other (except for phosphate etc.,hydrogen carbonate etc.)

Bucket of water or tank of water

### Specific hazards arising from the substance or mixture

Containers may explode when heated.

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

### Advice for firefighters

#### Specific fire-fighting measures

Evacuate non-essential personnel to safe area.

#### 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 full face piece operated positive pressure mode.

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## Section 6. Accidental release measures

### Personnel precautions, protective equipment and emergency procedures

Ventilate area until material pick up is complete.

Wear proper protective equipment.

### Environmental precautions

Prevent spills from entering sewers, watercourses or low areas.

**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.

**Preventive measures for secondary accident**

Collect spillage.

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**Section 7. Handling and storage****Precautions for safe handling****Preventive measures**

(Exposure Control for handling personnel)

Do not breathe dust/fume/gas/mist/vapors/spray.

(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**

Use only outdoors or in a well-ventilated area.

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

When using do not eat, drink or smoke.

**Any incompatibilities**

See "10.Stability and Reactivity"

**Advice on general occupational hygiene**

Wash contaminated parts thoroughly after handling.

Take off contaminated clothing and wash it before reuse.

**Storage****Conditions for safe storage**

Keep container tightly closed.

Store in a cool, dry place. Do not store in direct sunlight.

**Container and packaging materials for safe handling**

Glass

Polyethylene

Stainless steel

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**Section 8. Exposure controls/personal protection****Control parameters****Adopted value**

(Vinyl acetate)

ACGIH(2018) TWA: 10ppm;

STEL: 15ppm (URT & eye irr)

(Hydroquinone)

ACGIH(2014) TWA: 1mg/m<sup>3</sup> (Eye irr; eye dam)

**Notation**

(Hydroquinone)

DSEN

**OSHA-PEL**

(Hydroquinone)

TWA: 2mg/m<sup>3</sup>**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**

Wear respiratory protection.

**Hand protection**

Wear protective gloves.

**Eye protection**

Wear eye/face protection.

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**Section 9. Physical and Chemical Properties****Information on basic physical and chemical properties**

Physical state: Liquid

Color: Colourless

Odor: Characteristic odour

Melting point/Freezing point: -93.2°C

Boiling point or initial boiling point: (Vinyl acetate)72.7°C

Boiling range data is not available.

Flammability (gases, liquids and solids) data is not available.

Lower and upper explosion limit/flammability limit:

Lower explosion limit: 2.6 vol %

Upper explosion limit: 13.4 vol %

Flash point: (Vinyl acetate)-8°C

Auto-ignition temperature: (Vinyl acetate)385°C

Decomposition temperature data is not available.

pH data is not available.

Kinematic viscosity data is not available.

Solubility:

Solubility in water: Poor (2 g/100 ml, 20°C)

n-Octanol/water partition coefficient: log Pow0.73

Vapor pressure: 11.7 kPa (20°C)

Density and/or relative density: 0.93

Relative vapor density (Air=1): 3

Particle characteristics data is not available.

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**Section 10. Stability and Reactivity****Reactivity**

Not available.

**Chemical stability**

Stable under normal storage/handling conditions.

**Possibility of hazardous reactions**

The vapour is heavier than air and may travel along the ground; distant ignition possible.

Vapours are uninhibited and may polymerize, causing blockage of vents.

The substance polymerizes under the influence of heat and light. This generates fire or explosion hazard. Reacts violently with strong oxidants, acids and bases. (ICSC 0347)

**Conditions to avoid**



Contact with incompatible materials.

Contact with fire source.

Incompatible materials

Acids, Bases, Strong oxidizing agents

Hazardous decomposition products

Carbon oxides

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## Section 11. Toxicological Information

Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

[Data for components of the product]

[GHS Cat. Japan, base data]

(Vinyl acetate)

rat LD50=2920mg/kg (ACGIH 7th, 2018)

(Hydroquinone)

rat LD50=390mg/kg (SIDS, Access on Apr. 2012)

Acute toxicity (Dermal)

[Data for components of the product]

[GHS Cat. Japan, base data]

(Vinyl acetate)

rabbit LD50=2335mg/kg (PATTY 6th, 2012)

Acute toxicity (Inhalation)

[Data for components of the product]

[GHS Cat. Japan, base data]

(Vinyl acetate)

vapor: rat LC50=3680ppm/4hr (ACGIH 7th, 2018)

Irritant properties

Skin corrosion/irritation

[Data for components of the product]

[GHS Cat. Japan, base data]

(Vinyl acetate)

rabbit mild irritation (EU-RAR, 2008)

Serious eye damage/irritation

[Data for components of the product]

[GHS Cat. Japan, base data]

(Vinyl acetate)

rabbit mild irritation (EU-RAR, 2008)

(Hydroquinone)

rabbit corrosive damage (DFGMAK-Doc. 10, 1998)

Allergenic and sensitizing effects data is not available.

Germ cell mutagenicity

[Data for components of the product]

[GHS Cat. Japan, base data]

(Vinyl acetate)

cat. 2; IARC 63, 1995 et al.

Carcinogenicity

[Data for components of the product]

[GHS Cat. Japan, base data]

(Vinyl acetate)

cat.1B; (MHLW Carcinogenicity Test Report Results, Access on Sep. 2019)

[IARC]

(Vinyl acetate)

Group 2B : Possibly carcinogenic to humans

(Hydroquinone)

Group 3 : Not classifiable as to its carcinogenicity to humans

[ACGIH]

(Vinyl acetate)

A3(2018) : Confirmed Animal Carcinogen with Unknown Relevance to Humans

(Hydroquinone)

A3(2014) : Confirmed Animal Carcinogen with Unknown Relevance to Humans

[EU]

(Vinyl acetate)

Category 2; Substances suspected human carcinogens

(Hydroquinone)

Category 2; Substances suspected human carcinogens

Reproductive toxicity data is not available.

Specific target organ toxicity (STOT)

STOT-single exposure

[Data for components of the product]

[cat.3 (respiratory tract irritation)]

[GHS Cat. Japan, base data]

(Vinyl acetate)

respiratory tract irritation (ATSDR, 1992; ACGIH 7th, 2018)

[cat.3 (narcotic effects)]

[GHS Cat. Japan, base data]

(Vinyl acetate)

narcotic effect (MOE Environmental Risk Assessment for Chemical Substances vol.2, 2003)

STOT-repeated exposure

[Data for components of the product]

[cat.2]

[GHS Cat. Japan, base data]

(Vinyl acetate)

respiratory system (ACGIH 7th, 2018 et al.)

Aspiration hazard data is not available.

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## Section 12. Ecological Information

Toxicity

Aquatic toxicity

[Data for components of the product]

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

[GHS Cat. Japan, base data]

(Vinyl acetate)

Fish (*Oryzeas latipes*) LC50=2.4mg/L/96hr (MOE Japan, 2001)

(Hydroquinone)

Fish (*Pimephales promelas*) LC50=0.044mg/L/96hr (NITE Initial Risk Assessment Report, 2008)

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

[GHS Cat. Japan, base data]

(Vinyl acetate)

Algae (*Selenastrum capricornutum*) NOEC=0.2mg/L/72hr (MOE Japan, 2001)

(Hydroquinone)

Crustacea (*Daphnia magna*) NOEC=0.003mg/L/21days (MOE Japan, 2010)

Water solubility

(Vinyl acetate)

poor (2 g/100 ml, 20°C) (ICSC, 2014)

(Hydroquinone)



5.9 g/100 ml (15°C) (ICSC, 2001)

Persistence and degradability

[Data for components of the product]

(Vinyl acetate)

Rapidly degradable (BOD\_Degradation : 82, 98, 89%/28day (MITI official bulletin, 1988))

(Hydroquinone)

BOD\_Degradation : 70% (METI existing chemical safety inspections)

Bioaccumulative potential

[Data for components of the product]

(Vinyl acetate)

log Pow=0.73 (PHYSPROP DB, 2009)

(Hydroquinone)

log Pow=0.59 (PHYSPROP DB, 2009)

Mobility in soil

Mobility in soil data is not available.

Other adverse effects

Ozone depleting chemical data is not available.

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### 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

Avoid release to the environment.

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

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### Section 14. Transport Information

UN Number or ID Number : 1301

UN Proper Shipping Name :

VINYL ACETATE, STABILIZED

Class or division (Transport hazard class) : 3

Packing group : II

ERG GUIDE No.: 129P

Special provisions No.: 386

IMDG Code (International Maritime Dangerous Goods Regulations)

UN Number or ID Number : 1301

UN Proper Shipping Name :

VINYL ACETATE, STABILIZED

Class or division (Transport hazard class) : 3

Packing group : II

Special provisions No.: 386

IATA (Dangerous Goods Regulations)

UN Number or ID Number : 1301

UN Proper Shipping Name :

VINYL ACETATE, STABILIZED

Class or division (Transport hazard class) : 3

Hazard labels : Flamm.liquid

Packing group : II

Special provisions No.: A209

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





Vinyl acetate  
Flammable Liquid  
Vinyl acetate

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## Section 15. Regulatory Information

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

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

Chemicals listed in TSCA Inventory

Vinyl acetate; Hydroquinone

Other regulatory information

Ensure this material in compliance with federal requirements and ensure conformity to local regulations.

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## Section 16. Other information

GHS classification and labelling

Flammable liquids, Category 2: H225 Highly flammable liquid and vapour

Self-Reactive Substances and Mixtures, Type G

Acute toxicity, Category 4: H332 Harmful if inhaled

Skin corrosion/irritation, Category 2: H315 Causes skin irritation

Serious eye damage/eye irritation, Category 2: H319 Causes serious eye irritation

Germ cell mutagenicity, Category 2: H341 Suspected of causing genetic defects

Carcinogenicity, Category 1B: H350 May cause cancer

STOT – single exposure, Category 3, Respiratory tract irritation: H335 May cause respiratory irritation.

STOT – single exposure, Category 3, Narcotic effects: H336 May cause drowsiness or dizziness.

STOT – Repeated exposure, Category 2: H373 May cause damage to organs through prolonged or repeated exposure

Hazardous to the aquatic environment, short-term (acute), Category 2: H401 Toxic to aquatic life

Hazardous to the aquatic environment, long-term (chronic), Category 3: H412 Harmful to aquatic life with long lasting effects

References and sources for data

Globally Harmonized System of classification and labelling of chemicals, UN

Recommendations on the TRANSPORT OF DANGEROUS GOODS 21th edit., 2019 UN

IMDG Code, 2020 Edition (Incorporating Amendment 40–20)

IATA Dangerous Goods Regulations (62nd Edition) 2021

2020 EMERGENCY RESPONSE GUIDEBOOK (US DOT)

2022 TLVs and BEIs. (ACGIH)

Supplier's data/information

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 Japan official data (NITE published in 2021).