

Safety Data Sheet

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

Product identifier:

Product name: Polyvinyl alcohol 500

Reference number(SDS): 69310jis_E-2

Product type:

Reagent

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

2. Hazards identification

GHS classification and label elements of the product**Classification of the substance or mixture****HEALTH HAZARDS**

Specific target organ toxicity – single exposure: Category 2 (central nervous system, visual organs, systemic toxicity)

Label elements

Signal word: Warning

HAZARD STATEMENT

H371–May cause damage to organs

PRECAUTIONARY STATEMENT**Prevention**

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

Wash contaminated parts thoroughly after handling.

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

Response

IF exposed or concerned: Call a POISON CENTER/doctor/physician.

Storage

Store locked up.

Disposal

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

3. Composition/information on ingredients

Mixture/Substance selection:**Substance**

Ingredient name: Polyvinyl alcohol

Content (%): >=93.5

Chemical formula: $[\text{CH}_2\text{CH}(\text{OH})]_n$

Chemicals No, Japan: 6-682

CAS No.: 9002-89-5

Ingredient name: Methanol

Content (%): <3.0

Chemical formula: CH₄O

Chemicals No, Japan: 2-201

CAS No.: 67-56-1

MW: 32.04

ECNO: 200-659-6

Ingredient name: Methyl acetate

Content (%): <1.0

Chemical formula: C₃H₆O₂

Chemicals No, Japan: 2-725

CAS No.: 79-20-9

MW: 74.08

ECNO: 201-185-2

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

4. First-aid measures

Descriptions of first-aid measures

General measures

IF exposed or concerned: Call a POISON CENTER/doctor/physician.

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.

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.

Most important symptoms and effects, both acute and delayed

(Symptoms when inhalation or ingestion)

Cough

(Symptoms when skin and/or eye contact)

Conjunctival redness of the eyes

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

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

Unsuitable extinguishing media

Do not use direct water jet.

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.

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

Avoid release to headsprings, rivers, lakes, ocean and groundwater.

Methods and materials for containment and cleaning up

Sweep up, place in a bag and hold for waste disposal.

Preventive measures for secondary accident

Collect spillage.

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.

(Exhaust/ventilator)

Exhaust/ventilator should be available.

(Safety treatments)

Avoid contact with skin.

Avoid contact with eyes.

Safety Measures

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 acids, 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 data is not available.

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.

8. Exposure controls/personal protection

Control parameters

Control value

(Methanol)

Japan control value (1995) ≤ 200 ppm

(Methyl acetate)

Japan control value (1995) ≤ 200 ppm

Adopted value

(Methanol)

JSOH(1963) 200ppm; 260mg/m³

ACGIH(2009) TWA: 200ppm;

STEL: 250ppm (Headache; eye dam; dizziness; nausea)

Notation...Skin

(Methyl acetate)

JSOH(1963) 200ppm; 610mg/m³

ACGIH(2013) TWA: 200ppm;

STEL: 250ppm

(Headache; dizziness; nausea; eye dam (degeneration of ganglion cells in the retina))

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.

Consult with your glove and/or personnel equipment manufacturer for selection of appropriate compatible materials.

Eye protection

Wear safety glasses with side-shields.

Wear eye/face protection.

Skin and body protection

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

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state: Granule or powder

Color: White~Pale yellow

Odor data is not available.

Odor threshold data is not available.

Melting point/Freezing point data is not available.

Boiling point or initial boiling point data is not available.

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: (O.C.) 79°C

Auto-ignition temperature data is not available.

Decomposition temperature: $> 200^{\circ}\text{C}$

Self-Accelerating Decomposition Temperature/SADT data is not available.

pH data is not available.

Dynamic viscosity: 4.8~5.8(4%, 20°C)

Kinematic viscosity data is not available.

Solubility:

Solubility in water: Soluble

Solubility in solvent data is not available.

n-Octanol/water partition coefficient data is not available.

Vapor pressure data is not available.

Vapor density data is not available.

VOC data is not available.

Evaporation rate data is not available.

Density and/or relative density: 1.19~1.31

Relative vapor density (Air=1) data is not available.

Relative density of the Vapor/air - mixture at 20°C (Air = 1) data is not available.

Critical temperature data is not available.

Particle characteristics data is not available.

10. Stability and Reactivity

Reactivity

Reactivity data is not available.

Chemical stability

Stable under normal storage/handling conditions.

Possibility of hazardous reactions

May form explosive dust-air mixtures.

As a result of flow, agitation, etc., electrostatic charges can be generated.

Reacts with oxidants and strong acids.

Conditions to avoid

Contact with incompatible materials.

Open flames. Heat.

Incompatible materials

Strong acids, Oxidizing agents

Hazardous decomposition products

Carbon oxides

11. Toxicological Information

Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

[GHS Cat. Japan, base data]

(Methanol) human LD50=ca. 1400mg/kg (DFGOT vol.16, 2001)

Acute toxicity (Dermal)

[GHS Cat. Japan, base data]

(Methanol) rabbit LD50=15800mg/kg (DFGOT vol.16, 2001)

Acute toxicity (Inhalation)

[GHS Cat. Japan, base data]

(Methanol) vapor: rat LC50>31500ppm/4hr (DFGOT vol.16, 2001)

Labor standard law, Japan; Toxic

Methyl acetate; Methanol

Irritant properties

Skin corrosion/irritation data is not available.

Serious eye damage/irritation

[GHS Cat. Japan, base data]

(Methanol) rabbit category 2 : Draize test (EHC 196, 1997)

(Methyl acetate) rabbit : recover within 7 days (EU-RAR, 2003)

Allergenic and sensitizing effects data is not available.

Mutagenic effects data is not available.

Carcinogenicity

(Polyvinyl alcohol)

IARC-Gr.3 : Not Classifiable as a Human Carcinogen

Reproductive toxicity

[GHS Cat. Japan, base data]

(Methanol) cat. 1B; mouse : PATTY 5th, 2001

STOT

STOT-single exposure

[cat.1]

[GHS Cat. Japan, base data]

(Methanol) central nervous system; organ of vision; systemic toxicity (DFGOT vol.16, 2001)

[cat.3 (resp. irrit.)]

[GHS Cat. Japan, base data]

(Methyl acetate) respiratory tract irritation (PATTY 6th, 2012)

[cat.3 (drow./dizz.)]

[GHS Cat. Japan, base data]

(Methanol) narcotic effect (PATTY 5th, 2001)

(Methyl acetate) narcotic effect (PATTY 6th, 2012)

STOT-repeated exposure

[cat.1]

[GHS Cat. Japan, base data]

(Methanol)

central nervous system; organ of vision (ACGIH 7th, 2001)

Aspiration hazard data is not available.

Information on other hazards

Data on the preparation itself is not available.

12. Ecological Information

Ecotoxicity

Aquatic toxicity

Hazardous to the aquatic environment (Acute)

[GHS Cat. Japan, base data]

(Methanol) Crustacea (Brine shrimp) LC50=900.73mg/L/24hr (EHC196, 1998)

(Methyl acetate) Algae (green Algae) EC50 > 120mg/L/72hr (EU-RAR, 2003)

Water solubility

(Methanol) 100 g/100 ml (PHYSPROP_DB, 2009)

(Methyl acetate) 24.4 g/100 ml (20°C) (ICSC, 2014)

(Polyvinyl alcohol) good (ICSC, 2004)

Persistence and degradability

Persistence and degradability data is not available.

Bioaccumulative potential

(Methanol) log Pow=log Pow=-0.74 (ICSC, 2018)

(Methyl acetate) log Pow=0.18 (ICSC, 2014)

Mobility in soil

Mobility in soil data is not available.

Other adverse effects

Ozone depleting chemical data is not available.

Additional data

Data on the preparation itself is not available.

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.

14. Transport Information

UN No., UN CLASS

UN No. or ID No.: Not applicable

UN Proper Shipping Name : Not applicable

Class or division (Transport hazard class) : Not applicable

Packing group : Not applicable

Not applicable to IMDG Code

Not applicable to IATA Dangerous Goods Regulations

Environmental hazards

MARPOL Annex III – Prevention of pollution by harmful substances

Marine pollutants (yes/no) : no

MARPOL Annex V – Prevention of pollution by garbage discharge

Reproductive toxicity: cat.1, 1A, 1B

Methanol

Maritime transport in bulk according to IMO instruments

Noxious Liquid ; Cat. Y

Methanol(Y-457)

Noxious Liquid ; Cat. Z

Methyl acetate(Z-57)

15. Regulatory Information

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

Chemicals listed in TSCA Inventory

Methanol; Methyl acetate; Polyvinyl alcohol

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 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.

16. Other information

GHS classification and labelling

H371–STOT SE 2: H371 May cause damage to organs

Reference Book

Globally Harmonized System of classification and labelling of chemicals, UN

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

IMDG Code, 2018 Edition (Incorporating Amendment 39-18)

IATA Dangerous Goods Regulations (62nd Edition) 2021

2020 EMERGENCY RESPONSE GUIDEBOOK (US DOT)

2021 TLVs and BEIs. (ACGIH)

JIS Z 7252 : 2019

JIS Z 7253 : 2019

2020 Recommendation on TLVs (JSOH)

Supplier's data/information

Chemicals safety data management system "GHS Assistant" Version 4.11 (<https://www.asahi-ghs.com/>)

NITE Chemical Risk Information Platform "NITE-CHRIP"

(https://www.nite.go.jp/en/chem/chrip/chrip_search/systemTop)

GHS Classification Guidance for Enterprises 2019 Revised Edition (Ver. 2.0) (Mar. 2020, METI)

Definitions and Abbreviations

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)

JSOH (Japan Society for Occupational Health)

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 Japan official data (NITE published in 2019).

But the data are partially changed based on our judgement.