

## Safety Data Sheet

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

#### Product identifier:

Product name: Xylene

Product code (SDS NO): 25165jis\_J\_E1-5

#### 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

##### PHYSICAL AND CHEMICAL HAZARDS

Flammable liquids: Category 3

##### HEALTH HAZARDS

Acute toxicity (Dermal): Category 4

Acute toxicity (Inhalation): Category 4

Skin corrosion/irritation: Category 2

Serious eye damage/eye irritation: Category 2

Carcinogenicity: Category 2

Reproductive toxicity: Category 1B

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

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

Specific target organ toxicity – repeated exposure: Category 1 (respiratory system, nervous system)

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

Aspiration hazard: Category 1

##### ENVIRONMENT HAZARDS

Hazardous to the aquatic environment (Acute): Category 2

Hazardous to the aquatic environment (Long-term): Category 2

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

#### Label elements



Signal word: Danger

#### HAZARD STATEMENT

H226-Flammable liquid and vapor

H312-Harmful in contact with skin

H332-Harmful if inhaled

H315-Causes skin irritation

H319-Causes serious eye irritation

H351-Suspected of causing cancer

H360-May damage fertility or the unborn child

- H370—Causes damage to organs after single exposure
- H336—May cause drowsiness or dizziness
- H372—Causes damage to organs through prolonged or repeated exposure
- H373—May cause damage to organs through prolonged or repeated exposure
- H304—May be fatal if swallowed and enters airways
- H401—Toxic to aquatic life
- H411—Toxic to aquatic life with long lasting effects

#### PRECAUTIONARY STATEMENT

##### Prevention

- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Avoid release to the environment.
- Keep away from heat/sparks/open flames/hot surfaces. – 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.
- 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.
- Use personal protective equipment as required.
- Do not eat, drink or smoke when using this product.

##### Response

- In case of fire: Use appropriate media other than water for extinction.
- Collect spillage.
- 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/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.
- IF SWALLOWED: Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.

##### Storage

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

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### 3. Composition/information on ingredients

#### Mixture/Substance selection:

##### Mixture

- Ingredient name: Xylene (Mixture of isomers)
- Content (%): 80.0
- Chemical formula: C<sub>8</sub>H<sub>10</sub>
- Chemicals No, Japan: 3-3;3-60

CAS No.:1330-20-7

MW:106.17

ECNO:215-535-7

Ingredient name:Ethylbenzene

Content (%):10~20

Chemical formula:C<sub>8</sub>H<sub>10</sub>

Chemicals No, Japan:3-28;3-60

CAS No.:100-41-4

MW:106.17

ECNO:202-849-4

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

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#### 4. First-aid measures

##### Descriptions of first-aid measures

###### General measures

Get medical attention/advice if you feel unwell.

###### IF INHALED

Remove person to fresh air and keep comfortable for breathing.

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

###### IF ON SKIN (or hair)

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

Wash with plenty of soap and water.

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

If skin irritation 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. Do NOT induce vomiting.

Immediately call a POISON CENTER or doctor/physician.

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

##### Most important symptoms and effects, both acute and delayed

(Symptoms when inhalation or ingestion)

Dizziness. Drowsiness. Headache. Nausea. Burning sensation. Abdominal pain.

##### Most important symptoms/effects

Dry skin. Redness. Pain.

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#### 5. Fire-fighting measures

##### Extinguishing media

###### Suitable extinguishing media

In case of fire, use water mist, foam, dry powder, CO<sub>2</sub> to extinguish.

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/flame resistant/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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**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 SAFETY:** Ventilate closed spaces before entering.

**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.

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

(Exposure Control for handling personnel)

Do not breathe vapors/fume.

(Protective measures against fire and explosion)

Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

(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 acids, 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.

Take off contaminated clothing and wash it before reuse.

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

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

Keep cool. Protect from sunlight.

Store locked up.

Container and packaging materials for safe handling data is not available.

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

(Ethylbenzene)

Japan control value (2012)  $\leq 20$ ppm

(Xylene (Mixture of isomers))

Japan control value (2004)  $\leq 50$ ppm

**Adopted value**

(Ethylbenzene)

JSOH(2001) 50ppm; 217mg/m<sup>3</sup>

ACGIH(2010) TWA: 20ppm

(URT irr; kidney dam; nephropathy; cochlear impair)

(Xylene (Mixture of isomers))

JSOH(2001) 50ppm; 217mg/m<sup>3</sup>

ACGIH(1992) TWA: 100ppm

STEL: 150ppm (URT & eye irr; CNS impair)

**OSHA-PEL**

(Xylene (Mixture of isomers))

TWA: 100ppm, 435mg/m<sup>3</sup>

(Ethylbenzene)

TWA: 100ppm, 435mg/m<sup>3</sup>

**NIOSH-REL**

(Ethylbenzene)

TWA: 100ppm; STEL: 125ppm

(Xylene (Mixture of isomers))

TWA: 100ppm; STEL: 150ppm

**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. Recommended material(s): viton

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.

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## 9. Physical and Chemical Properties

### Information on basic physical and chemical properties

Physical state: Liquid

Color: Colorless

Odor: Characteristic odor

Odor threshold: 60 mg/m<sup>3</sup>(Xylene (Mixture of isomers))

pH data is not available.

Boiling point or initial boiling point: 137~140°C(Xylene (Mixture of isomers))

Boiling range data is not available.

Evaporation rate data is not available.

Melting point/Freezing point: <-25°C (Xylene (Mixture of isomers))

Decomposition temperature data is not available.

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

Flammability (gases, liquids and solids): Ignitable

Flash point: (c.c.)29°C(Xylene (Mixture of isomers))

Auto-ignition temperature: 432°C(Ethylbenzene)

Critical temperature data is not available.

Lower and upper explosion limit/flammability limit:

Lower explosion limit: 1.0 vol %(Ethylbenzene)

Upper explosion limit: 6.7 vol %(Ethylbenzene)

Vapor pressure data is not available.

Vapor density data is not available.

VOC data is not available.

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.

Density and/or relative density: 0.860~0.870 g/ml (20°C)

Dynamic viscosity data is not available.

Kinematic viscosity data is not available.

Solubility:

Solubility in water: Insoluble

Solubility in solvent: Miscible with the usual organic solvents.

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

No Particle characteristics data is not available.

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## 10. Stability and Reactivity

### Reactivity

Runaway polymerization will not occur.

### Chemical stability

Stable under normal storage/handling conditions.

Flammable.

### Possibility of hazardous reactions

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

Reacts with strong acids and strong oxidants.

### Conditions to avoid

Contact with incompatible materials.

Open flames. Heat. Sparks.

## Incompatible materials

Strong acids, Strong oxidizing agents

## Hazardous decomposition products

Carbon oxides

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**11. Toxicological Information**

## Information on toxicological effects

## Acute toxicity

## Acute toxicity (Oral)

[GHS Cat. Japan, base data]

(Ethylbenzene) rat LD50=3500mg/kg (EHC 186, 1996)

(Xylene (Mixture of isomers)) rat LD50=3500~ 8800mg/kg (NITE risk assessment, 2008)

## Acute toxicity (Dermal)

[GHS Cat. Japan, base data]

(Xylene (Mixture of isomers)) rabbit LD50=1700mg/kg (EPA Pesticide, 2005)

## Acute toxicity (Inhalation)

[GHS Cat. Japan, base data]

(Ethylbenzene) vapor: rat LC50=4000ppm/4hr (PATTY 6th, 2012)

(Xylene (Mixture of isomers)) vapor: rat LC50=6350~6700ppm/4hr (NITE primary risk assessment, 2008)

## Labor standard law, Japan; Toxic

Xylene (Mixture of isomers)

## Irritant properties

## Skin corrosion/irritation

[GHS Cat. Japan, base data]

(Xylene (Mixture of isomers)) rabbit : erythema, edema, necrosis (NITE primary risk assesment, 2008)

## Serious eye damage/irritation

[GHS Cat. Japan, base data]

(Ethylbenzene) rabbit : mild (EHC 186, 1996)

(Xylene (Mixture of isomers)) rabbit : mild to moderate (NITE primary risk assesment, 2008)

Allergenic and sensitizing effects data is not available.

Mutagenic effects data is not available.

## Carcinogenicity

[GHS Cat. Japan, base data]

(Ethylbenzene)

cat.2; IARC Gr. 2B (IARC, 2000 et al.)

IARC-Gr.2B : Possibly carcinogenic to humans

ACGIH-A3(2010) : Confirmed Animal Carcinogen with Unknown Relevance to Humans

EPA-Group D; Not Classifiable as to Human Carcinogenicity(1986)

JSOH-2B: Insufficient Evidence of Carcinogenicity for Humans

(Xylene (Mixture of isomers))

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

ACGIH-A4(1992) : Not Classifiable as a Human Carcinogen

EPA-I; "Inadequate Information to Assess Carcinogenic Potencial"(2005)

## Reproductive toxicity

[GHS Cat. Japan, base data]

(Xylene (Mixture of isomers)) cat. 1B; ATSDR, 2007

(Ethylbenzene) cat. 1B; JSOH, 2014

## STOT

## STOT-single exposure

[cat.1]

[GHS Cat. Japan, base data]

(Xylene (Mixture of isomers)) CNS; respiratory apparatus; liver; kidney (NITE risk assessment, 2008)

[cat.3 (resp. irrit.)]

[GHS Cat. Japan, base data]

(Ethylbenzene) respiratory tract irritation (MOE risk assessment, 2015)

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

[GHS Cat. Japan, base data]

(Xylene (Mixture of isomers)) narcosis (NITE risk assessment, 2008)

(Ethylbenzene) narcosis (ATSDR, 2010)

STOT-repeated exposure

[cat.1]

[GHS Cat. Japan, base data]

(Xylene (Mixture of isomers)) nerve/nervous system; respiratory apparatus (NITE risk assessment, 2008)

[cat.2]

[GHS Cat. Japan, base data]

(Ethylbenzene) hearing organ (ACGIH 7th, 2011)

Aspiration hazard

[cat.1]

[GHS Cat. Japan, base data]

(Xylene (Mixture of isomers))

cat. 1; kinematic viscosity=0.86(o-), 0.67(m-), 0.70(p-) mm<sup>2</sup>/s (25°C) (HSDB, Access on December 2014)  
(Ethylbenzene)

cat. 1; hydrocarbon, kinematic viscosity=0.738 mm<sup>2</sup>/s (25°C)

Additional data

Data on the preparation itself is not available.

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## 12. Ecological Information

Ecotoxicity

Aquatic toxicity

H401-Toxic to aquatic life

H411-Toxic to aquatic life with long lasting effects

Aquatic acute toxicity component(s) data

[GHS Cat. Japan, base data]

(Ethylbenzene)

Crustacea (bayshrimp) LC50=0.42mg/L/96hr (NITE primary risk assessment, 2007)

(Xylene (Mixture of isomers))

Fish (rainbow trout) LC50=3.3mg/L/96hr (NITE primary risk assessment, 2005)

Aquatic chronic toxicity component(s) data

[GHS Cat. Japan, base data]

(Ethylbenzene)

Crustacea (Ceriodaphnia reticulata) NOEC=0.956mg/L/7days (MOE Japan, 2015)

Water solubility

(Ethylbenzene) 0.015 g/100 ml (20°C) (ICSC, 2007)

(Xylene (Mixture of isomers)) 106 mg/L (25°C) (HSDB)

Persistence and degradability

(Ethylbenzene)

Not degrade rapidly (BOD\_Degradation : 0% (MITI official bulletin, 1990))

(Xylene (Mixture of isomers))

Not degrade rapidly (BOD\_Degradation : 39% (NITE primary risk assessment, 2005))

Bioaccumulative potential

(Ethylbenzene) log Pow=3.15 (PHYSPROP DB, 2005)

(Xylene (Mixture of isomers)) log Pow=3.16 (PHYSPROP DB, 2005)

Mobility in soil data is not available.

Ozone depleting chemical data is not available.



## Additional data

Data on the preparation itself is not available.

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**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 (– if this is not the intended use).

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

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**14. Transport Information**

## UN No., UN CLASS

UN No.: 1307

Proper Shipping Name : XYLENES

Class or division : 3

Packing group : III

ERG GUIDE No.: 130

## IMDG Code (International Maritime Dangerous Goods Regulations)

UN No.: 1307

Proper Shipping Name : XYLENES

Class or division : 3

Packing group : III

## IATA Dangerous Goods Regulations

UN No.: 1307

Proper Shipping Name : XYLENES

Class or division : 3

Hazard labels : Flamm.liquid

Packing group : III

## Environmental hazards

MARPOL Annex III – Prevention of pollution by harmful substances

Marine pollutants (yes/no) : yes

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**15. Regulatory Information**

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

## Environmental hazards

MARPOL Annex V – Prevention of pollution by garbage discharge

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

Xylene (Mixture of isomers) , Ethylbenzene

Specific target organ toxicity – repeated exposure: cat.1

Xylene (Mixture of isomers)

Hazardous to the aquatic environment – long-term hazard: cat.1, 2

Xylene (Mixture of isomers) , Ethylbenzene

## Transport in bulk according to Annex II of MARPOL73/78 and IBC Code

Noxious Liquid ; Cat. Y

Ethylbenzene; Xylene (Mixture of isomers)

## Basel law, Japan

Xylene (Mixture of isomers); Ethylbenzene

## US major regulations

Chemicals listed in TSCA Inventory

Ethylbenzene; Xylene (Mixture of isomers)

**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).

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**16. Other information****GHS classification and labelling**

H226-Flam. Liq. 3: H226 Flammable liquid and vapor  
H312-Acute Tox. 4: H312 Harmful in contact with skin  
H332-Acute Tox. 4: H332 Harmful if inhaled  
H315-Skin Irrit. 2: H315 Causes skin irritation  
H319-Eye Irrit. 2: H319 Causes serious eye irritation  
H351-Carc. 2: H351 Suspected of causing cancer  
H360-Repr. 1B: H360 May damage fertility or the unborn child  
H370-STOT SE 1: H370 Causes damage to organs after single exposure  
H336-STOT SE 3: H336 May cause drowsiness or dizziness  
H372-STOT RE 1: H372 Causes damage to organs through prolonged or repeated exposure  
H373-STOT RE 2: H373 May cause damage to organs through prolonged or repeated exposure  
H304-Asp. Tox. 1: H304 May be fatal if swallowed and enters airways  
H401-Aquatic Acute 2: H401 Toxic to aquatic life  
H411-Aquatic Chronic 2: H411 Toxic to aquatic life with long lasting effects

**Reference Book**

Globally Harmonized System of classification and labelling of chemicals, (6th ed., 2015), UN  
Recommendations on the TRANSPORT OF DANGEROUS GOODS 20th edit., 2017 UN  
IMDG Code, 2018 Edition (Incorporating Amendment 39-18)  
IATA Dangerous Goods Regulations (60th Edition) 2019  
Classification, labelling and packaging of substances and mixtures (table3-1 ECNO6182012)  
2016 EMERGENCY RESPONSE GUIDEBOOK (US DOT)  
2019 TLVs and BEIs. (ACGIH)  
<http://monographs.iarc.fr/ENG/Classification/index.php>  
JIS Z 7253 : 2019  
JIS Z 7252 : 2019  
2019 Recommendation on TLVs (JSOH)  
Supplier's data/information  
Chemicals safety data management system "GHS Assistant" (<https://www.asahi-ghs.com/>)  
NITE Chemical Risk Information Platform (NITE-CHRIP)  
[https://www.nite.go.jp/en/chem/chrip/chrip\\_search/systemTop](https://www.nite.go.jp/en/chem/chrip/chrip_search/systemTop)  
GHS Classification Guidance for Enterprises 2013 Revised Edition (Aug. 2013, METI)

**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 2018).