

Safety Data Sheet

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

Product identifier:

Product name: General Solvent

Product code (SDS NO): AG_General_Solvent_USFJ-2

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

Relevant identified uses of the product: Industrial use

Details of the supplier of the safety data sheet

Manufacturer/Supplier: Asahi Graphic Corporation

Address: KOHGA Bldg. 3F, 4-23-8 Ebisu, Shibuya-ku, Tokyo, 150-0013 Japan

Telephone number: +81-3-5424-3016

FAX: +81-3-5424-3018

Emergency telephone number: +81-3-5424-3016

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

Skin corrosion/irritation: Category 2

Serious eye damage/eye irritation: Category 2

Carcinogenicity: Category 1B

Reproductive toxicity: Category 1B

Specific target organ toxicity – single exposure: Category 2

(liver, nervous system, central nervous system, respiratory system, kidneys)

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

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

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

Aspiration hazard: Category 1

ENVIRONMENT HAZARDS

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

Hazardous to the aquatic environment, long-term (chronic): Category 2

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

Label elements



Signal word: Danger

HAZARD STATEMENT

H226 Flammable liquid and vapor

H315 Causes skin irritation

H319 Causes serious eye irritation

H350 May cause cancer

H360 May damage fertility or the unborn child

H371 May cause damage to organs

(liver, nervous system, central nervous system, respiratory system, kidneys)

H336 May cause drowsiness or dizziness

H372 Causes damage to organs through prolonged or repeated exposure

(central nervous system, respiratory system)

H373 May cause damage to organs through prolonged or repeated exposure (auditory organ, nervous system)

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

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P273 Avoid release to the environment.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P233 Keep container tightly closed.

P240 Ground and bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting equipment.

P242 Use non-sparking tools.

P243 Take action to prevent static discharges.

P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P261 Avoid breathing dust/fume/gas/mist/vapors/spray.

P271 Use only outdoors or in a well-ventilated area.

P264 Wash contaminated parts thoroughly after handling.

P280 Wear protective gloves.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P280 Wear eye protection/face protection.

P280 Use personal protective equipment as required.

P270 Do not eat, drink or smoke when using this product.

Response

P370 + P378 In case of fire: Use appropriate media to extinguish.

P391 Collect spillage.

P321 Specific treatment is required.

P314 Get medical advice/attention if you feel unwell.

P308 + P313 IF exposed or concerned: Get medical advice/attention.

P312 Call a POISON CENTER/doctor/physician if you feel unwell.

P308 + P311 IF exposed or concerned: Call a POISON CENTER/doctor/physician.

P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing.

Rinse skin with water or shower.

P332 + P313 If skin irritation occurs: Get medical advice/attention.

P362 + P364 Take off contaminated clothing and wash it before reuse.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313 If eye irritation persists: Get medical advice/attention.

P331 Do NOT induce vomiting.

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor/physician.

Storage

P403 Store in a well-ventilated place. P233 Keep container tightly closed. P235 Keep cool.

P405 Store locked up.

Disposal

P501 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

Ingredient name	CAS No.	Content (%)	Chemicals No, Japan
Solvent naphtha	64742-95-6	50 - 60	-
1,2,4-trimethylbenzene	95-63-6	10 - 20	3-7; 3-3427
1,3,5-trimethylbenzene	108-67-8	1 - 10	3-7; 3-3427
Xylene (Mixture of isomers)	1330-20-7	1 - 10	3-3; 3-60
Ethylbenzene	100-41-4	1 - 10	3-28; 3-60
Cumene	98-82-8	1 - 10	3-22

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

Components contributing to the hazard

Component(s) come under Labeling, etc. article of Industrial Safety and Health Act, Japan

Solvent naphtha , 1,2,4-trimethylbenzene , 1,3,5-trimethylbenzene , Xylene (Mixture of isomers) , Ethylbenzene , Cumene

Component(s) come under Deliver of Documents, etc. article of Industrial Safety and Health Act, Japan

Solvent naphtha , 1,2,4-trimethylbenzene , 1,3,5-trimethylbenzene , Xylene (Mixture of isomers) , Ethylbenzene , Cumene

Component(s) listed in chemicals Gr.1 in Japan PRTR Law.

1,2,4-trimethylbenzene , 1,3,5-trimethylbenzene , Xylene (Mixture of isomers) , Ethylbenzene , Cumene

Section 4. First-aid measures

Descriptions of first-aid measures

General measures

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.

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 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

Do NOT induce vomiting.

Immediately call a POISON CENTER/doctor/physician.

Most important symptoms and effects, both acute and delayed

(Symptoms when inhalation or ingestion)

Nausea, Headache, Drowsiness, Cough, Dizziness, Sore throat, Confusion

(Symptoms when skin and/or eye contact)

Dry skin, Conjunctival redness of the eyes

Indication of any immediate medical attention and special treatment needed

Specific treatment is required.

Section 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

Will form toxic carbon oxides upon combustion.

Advice for firefighters

Specific fire-fighting measures

Evacuate non-essential personnel to safe area.

In case of leakage, eliminate all ignition sources.

Cool container with water spray.

Apply water from a safe distance to cool and protect surrounding area.

Prevent extinguishing water from entering sewers.

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

Evacuate area.

Keep unauthorized personnel away.

Wear an air-supplied respirator for handling a spill at a poor ventilated workplace.

Wear proper protective equipment.

Eliminate all sources of ignition and ventilate the area.

Environmental precautions

Prevent spills from entering sewers, watercourses or low areas.

Do not wash away into sewers or waterway.

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.

For large spill, dike for later disposal.

Fill the disposal into labelled, closable containers.

Preventive measures for secondary accident

Collect spillage.

Prepare extinguishers before catching fire.

Stop leak if safe to do so.

Prevent entry into waterways, sewers, basements or confined areas.

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.

Avoid breathing 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

- 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.
- Wear protective gloves.
- Wear eye protection/face protection.
- Use personal protective equipment as required.

Any incompatibilities

- Strong oxidizing agents should not be mixed with the chemicals.

Advice on general occupational hygiene

- Do not get in eyes, on skin, or on clothing.
- 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.
- Wash hands thoroughly after handling.

Storage

Conditions for safe storage

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

(Incompatible storage condition)

- Avoid heat and sources of ignition (flames, sparks, etc.).

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

Section 8. Exposure controls/personal protection

Control parameters

Control value

- (Xylene (Mixture of isomers))
Japan control value (2004) ≤ 50 ppm
- (Ethylbenzene)
Japan control value (2012) ≤ 20 ppm

Adopted value

- (1,2,4-trimethylbenzene)
JSOH(1984) 25ppm; 120mg/m³
- (1,3,5-trimethylbenzene)
JSOH(1984) 25ppm; 120mg/m³
- (Xylene (Mixture of isomers))
JSOH(2001) 50ppm; 217mg/m³
- (Ethylbenzene)
JSOH(2020) 20ppm; 87mg/m³ (skin)
- (Cumene)
JSOH(2019) 10ppm; 50mg/m³ (skin)

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(1,2,4-trimethylbenzene)

ACGIH(2021) TWA: 10ppm (CNS impair; hematologic eff)

(1,3,5-trimethylbenzene)

ACGIH(2021) TWA: 10ppm (CNS impair; hematologic eff)

(Xylene (Mixture of isomers))

ACGIH(2021) TWA: 20ppm (Eye & URT irr; hematologic eff; ototoxicity; CNS impair)

(Ethylbenzene)

ACGIH(2021) TWA: 20ppm

(URT & eye irr; ototoxicity; kidney eff; CNS impair)

(Cumene)

ACGIH(2020) TWA: 5ppm (URT adenoma; neurological eff)

Notation

(Xylene (Mixture of isomers))

OTO

(Ethylbenzene)

OTO

OSHA-PEL

(Cumene)

TWA: 50ppm, 245mg/m³

(Ethylbenzene)

TWA: 100ppm, 435mg/m³

(Xylene (Mixture of isomers))

TWA: 100ppm, 435mg/m³

NIOSH-REL

(Xylene (Mixture of isomers))

TWA: 100ppm; STEL: 150ppm

(Cumene)

TWA: 50ppm

(Ethylbenzene)

TWA: 100ppm; STEL:125ppm

California proposition 65

Cancer NSRL

(Ethylbenzene)

NSRL=54 μ g/day (inhalation); 41 μ g/day (oral)

Exposure controls

Appropriate engineering controls

Exhaust/ventilator should be available.

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): impermeable or chemical resistant rubber

Eye protection

Wear safety glasses with side-shields or chemical safety goggle.

Skin and body protection

Wear protective clothing.

Section 9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state: Liquid

Color: Colorless

Odor: Petroleum odor

Odor threshold data is not available.

Melting point/Freezing point data is not available.

Boiling point or initial boiling point: 130°C

Boiling range data is not available.

Flammability (gases, liquids and solids): Flammable

Lower and upper explosion limit/flammability limit:

Lower explosion limit: 0.6vol %

Upper explosion limit: 7vol %

Flash point: (Closed cup)39°C

Auto-ignition temperature: 432°C

Decomposition temperature data is not available.

pH data is not available.

Dynamic viscosity: 20.1mPas(20°C)

Kinematic viscosity: 17.5mm²/s(40°C)

Solubility:

Solubility in water: Insoluble

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: 0.88(20°C)

Relative vapor density (Air=1): 4.1

Particle characteristics: Not applicable

Section 10. Stability and Reactivity

Reactivity

Reactivity data is not available.

Chemical stability

Stable under normal storage/handling conditions.

Possibility of hazardous reactions

Vapors may catch fire and explode.

Conditions to avoid

Avoid heat and sources of ignition (flames, sparks, etc.).

Incompatible materials

Strong oxidizing agents

Hazardous decomposition products

The following substances are produced by pyrolysis.

Carbon oxides

Section 11. Toxicological Information

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]

[GHS Cat. Japan, base data]

(1,2,4-trimethylbenzene)

female rat LD50=3280mg/kg (REACH Registration dossier, Accessed Aug. 2021)

(1,3,5-trimethylbenzene)

rat LD50=4300-8642mg/kg (NITE Initial Risk Assessment Report, 2008)

(Xylene (Mixture of isomers))

rat LD50=3500 - 8800mg/kg (NITE risk assessment, 2008)

(Ethylbenzene)

rat LD50=3500-4700mg/kg (AICIS IMAP, 2020)

(Cumene)

rat LD50=2700mg/kg (ACGIH, 2001)

Acute toxicity (Dermal)

[Product]

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

[Data for components of the product]

[GHS Cat. Japan, base data]

(Xylene (Mixture of isomers))

rabbit LD50=1700mg/kg (EPA Pesticide, 2005)

(Ethylbenzene)

rabbit LD50=15400mg/kg (ACGIH, 2011)

(Cumene)

rabbit LD50 >3160mg/kg (AICIS IMAP, 2016)

Acute toxicity (Inhalation)

[Product]

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

[Data for components of the product]

[GHS Cat. Japan, base data]

(1,2,4-trimethylbenzene)

mist: rat LC50=18000mg/m³/4hr (18mg/L/4hr)

(MOE Result of the initial environmental risk assessment of chemicals, 2009)

(1,3,5-trimethylbenzene)

mist: rat LC50=4800ppm/4hr (24mg/L/4hr)

(MOE Result of the initial environmental risk assessment of chemicals, 2013)

(Xylene (Mixture of isomers))

vapor: rat LC50=6350-6700ppm/4hr (NITE Initial Risk Assessment Report, 2008)

(Ethylbenzene)

vapor: rat LC50=4000ppm/4hr (OEL Documentations (JSOH), 2020)

mist: rat LC50=55mg/L/2hr (cal.: 27.5mg/L/4hr)

(MOE Result of the initial environmental risk assessment of chemicals, 2015)

(Cumene)

vapor: mouse LC50=2000ppm/7hr (cal.: 2645ppm/4hr) (OEL Documentations (JSOH), 2019)

mist: rat LC50=39.3mg/L/4hr (OEL Documentations (JSOH), 2019)

Irritant properties

Skin corrosion/irritation

[Product]

Category 2, Causes skin irritation

[Data for components of the product]

[GHS Cat. Japan, base data]

(1,2,4-trimethylbenzene)

skin irritation (MOE Result of the initial environmental risk assessment of chemicals, 2009)

(1,3,5-trimethylbenzene)

rabbit (OECD TG 404) moderate to severe irritation (NITE Initial Risk Assessment Report, 2008)

(Xylene (Mixture of isomers))

rabbit erythema, edema, necrosis (CERI/NITE Hazard Assessment Report, 2008)

Serious eye damage/irritation

[Product]

Category 2, Causes serious eye irritation

[Data for components of the product]

[GHS Cat. Japan, base data]

(1,2,4-trimethylbenzene)

eye irritation (MOE Result of the initial environmental risk assessment of chemicals, 2009)

(1,3,5-trimethylbenzene)

rabbit mild irritation (NITE Initial Risk Assessment Report, 2008)

(Xylene (Mixture of isomers))

rabbit mild to moderate irritation (CERI/NITE Hazard Assessment Report, 2008)

(Ethylbenzene)

rabbit mild irritation (NITE Initial Risk Assessment Report, 2007 et al)

(Cumene)

mild irritation (MHLW risk assessment Report, 2015)

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 1B, May cause cancer

[Data for components of the product]

[GHS Cat. Japan, base data]

(Ethylbenzene)

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

(Cumene)

cat.1B; (CLH Report, 2019 et al.)

[IARC]

(Xylene (Mixture of isomers))

Group 3 : Not classifiable as to its carcinogenicity to humans

(Ethylbenzene)

Group 2B : Possibly carcinogenic to humans

(Cumene)

Group 2B : Possibly carcinogenic to humans

[ACGIH]

(1,2,4-trimethylbenzene)

A4(2021) : Not Classifiable as a Human Carcinogen

(Xylene (Mixture of isomers))

A4(2021) : Not Classifiable as a Human Carcinogen

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(Ethylbenzene)

A3(2021) : Confirmed Animal Carcinogen with Unknown Relevance to Humans
(Cumene)A3(2020) : Confirmed Animal Carcinogen with Unknown Relevance to Humans
[JSOH]

(Ethylbenzene)

Group 2B: The agents which are probably or possibly carcinogenic to humans
(Cumene)Group 2B: The agents which are probably or possibly carcinogenic to humans
[NTP]

(Cumene)

RAHC : Reasonably Anticipated to be Human Carcinogens
[EU]

(Solvent naphtha)

Category 1B; Substances presumed to have carcinogenic potential for humans
(Cumene)

Category 1B; Substances presumed to have carcinogenic potential for humans

Reproductive toxicity

[Product]

Category 1B, May damage fertility or the unborn child

[Data for components of the product]

[GHS Cat. Japan, base data]

(Xylene (Mixture of isomers))

cat. 1B; ATSDR, 2007

(Ethylbenzene)

cat. 1B; Recommendation of Occupational Exposure Limits (JSOH), 2021; 2021; ACGIH 7th, 2011 et al.

Specific target organ toxicity (STOT)

STOT-single exposure

[Product]

Category 2, May cause damage to organs

Category 3, May cause drowsiness or dizziness

[Data for components of the product]

[cat.1]

[GHS Cat. Japan, base data]

(Xylene (Mixture of isomers))

liver, central nervous system, respiratory system, kidneys (CERI/NITE Hazard Assessment Report, 2008)

(Cumene)

nervous system (MHLW Risk Assessment Report, 2015)

[cat.3 (respiratory tract irritation)]

[GHS Cat. Japan, base data]

(1,2,4-trimethylbenzene)

respiratory tract irritation (ACGIH, 2001)

(1,3,5-trimethylbenzene)

respiratory tract irritation (MOE Result of the initial environmental risk assessment of chemicals, 2013)

(Ethylbenzene)

respiratory tract irritation (ACGIH, 2011; AICIS IMAP, 2020)

(Cumene)

respiratory tract irritation (MHLW Risk Assessment Report, 2015)

[cat.3 (narcotic effects)]

[GHS Cat. Japan, base data]

(1,2,4-trimethylbenzene)

narcotic effect (US AEGL, 2012 et al.)

(1,3,5-trimethylbenzene)

narcotic effect (MOE Result of the initial environmental risk assessment of chemicals, 2013)

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(Xylene (Mixture of isomers))

narcotic effect (CERI/NITE Hazard Assessment Report, 2008)

(Ethylbenzene)

narcotic effect (ACGIH, 2011)

(Cumene)

narcotic effect (MHLW Risk Assessment Report, 2015)

STOT-repeated exposure

[Product]

Category 1, Causes damage to organs through prolonged or repeated exposure

Category 2, May cause damage to organs through prolonged or repeated exposure

[Data for components of the product]

[cat.1]

[GHS Cat. Japan, base data]

(1,2,4-trimethylbenzene)

central nervous system, respiratory system (MOE Result of the initial environmental risk assessment of chemicals, 2009; EPA Tox Review, 2016)

(1,3,5-trimethylbenzene)

central nervous system, respiratory system (MOE Result of the initial environmental risk assessment of chemicals, 2013)

(Xylene (Mixture of isomers))

nervous system, respiratory system (CERI/NITE Hazard Assessment Report, 2008)

(Ethylbenzene)

auditory organ, nervous system (JSOH OEL Documentations, 2020)

[cat.2]

[GHS Cat. Japan, base data]

(Cumene)

respiratory system (JSOH OEL Documentations, 2019)

Aspiration hazard

[Product]

Category 1, May be fatal if swallowed and enters airways

[Data for components of the product]

[cat.1]

[GHS Cat. Japan, base data]

(1,2,4-trimethylbenzene)

cat. 1; hydrocarbon, kinematic viscosity=0.843 mm²/s (20°C), 0.630 mm²/s (50°C)

(Isomer of this substance; 1,3,5-Trimethylbenzene) (GESTIS, 2021)

(1,3,5-trimethylbenzene)

cat. 1; hydrocarbon, kinematic viscosity=0.843 mm²/s (20°C), 0.630 mm²/s (50°C)

(REACH Registration dossier, Accessed July 2021)

(Xylene (Mixture of isomers))

cat. 1; kinematic viscosity=0.86(o-), 0.67(m-), 0.70(p-) mm²/s (25°C) (HSDB, 2014)

(Ethylbenzene)

cat. 1; hydrocarbon, kinematic viscosity=0.63 mm²/s (40°C) (CLH Report, 2010)

(Cumene)

cat. 1; hydrocarbon, kinematic viscosity=0.73 x 10⁻⁶ mm²/s (40°C) (EU RAR, 2001)

Section 12. Ecological Information

Toxicity

Aquatic toxicity

[Product]

Category 2, Toxic to aquatic life

Category 2, Toxic to aquatic life with long lasting effects

[Data for components of the product]

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

[GHS Cat. Japan, base data]

(1,2,4-trimethylbenzene)

Fish (Pimephales promelas) LC50=7.72mg/L/96hr

(Risk assessment of priority assessment chemical substances, 2015)

(1,3,5-trimethylbenzene)

Crustacea (Daphnia magna) EC50=6mg/L/48hr; Fish (Carassius auratus) LC50=12.5mg/L/96hr

(NITE Initial Risk Assessment Report, 2008)

(Xylene (Mixture of isomers))

Fish (rainbow trout) LC50=3.3mg/L/96hr (NITE Initial Risk Assessment, 2005)

(Ethylbenzene)

Crustacea (bayshrimp) LC50=0.42mg/L/96hr (NITE Initial Risk Assessment Report, 2007)

(Cumene)

Crustacea (Mysidopsis bahia) LC50=1.2mg/L/96hr (CICAD18, 1999)

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

[GHS Cat. Japan, base data]

(1,3,5-trimethylbenzene)

Crustacea (Daphnia magna) NOEC=0.4mg/L/21days (SIAP, 2012)

(Ethylbenzene)

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

Water solubility

(1,2,4-trimethylbenzene)

very poor (ICSC, 2002)

(1,3,5-trimethylbenzene)

very poor (ICSC, 2002)

(Ethylbenzene)

0.015 g/100 ml (20°C) (ICSC, 2007)

(Cumene)

very poor (0.02 g/100ml, 20°C) (ICSC, 2014)

Persistence and degradability

[Data for components of the product]

(1,2,4-trimethylbenzene)

Not rapidly degradable (BOD_Degradation : average 8.7%/28 days

(METI Existing Chemical Substances Safety Inspections Data, 1980))

(1,3,5-trimethylbenzene)

Not rapidly degradable

(BOD_Degradation : 0%/14 days (METI Existing Chemical Substances Safety Inspections Data, 1980))

(Xylene (Mixture of isomers))

Not rapidly degradable (BOD_Degradation : 39% (NITE Initial Risk Assessment Report, 2005))

(Ethylbenzene)

Not rapidly degradable (BOD_Degradation : 0% (MITI official bulletin, 1990))

(Cumene)

Not rapidly degradable (Degradation : 13% (EU-RAR, 2001))

Bioaccumulative potential

[Data for components of the product]

(1,2,4-trimethylbenzene)

log Pow=3.8 (ICSC, 2002)

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(1,3,5-trimethylbenzene)

log Pow=3.42 (ICSC, 2002); BCF=342 (Check & Review, Japan)

(Xylene (Mixture of isomers))

log Pow=3.16 (PHYSPROP DB, 2005)

(Ethylbenzene)

log Kow=3.15 (PHYSPROP DB, 2005)

(Cumene)

log Pow=3.66 (PHYSPROP DB, 2005)

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

Avoid release to the environment.

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

Dispose to an authorized waste collection point.

Do not dump into sewers, on the ground or into any body of water.

Contaminated packing

Dispose of container after using the contents completely.

Section 14. Transport Information**UN No., UN CLASS**

UN Number or ID Number : 1268

UN Proper Shipping Name :

PETROLEUM DISTILLATES, N.O.S or PETROLEUM PRODUCTS, N.O.S.

Class or division (Transport hazard class) : 3

Packing group : III

ERG GUIDE No.: 128

Special provisions No.: 223

IMDG Code (International Maritime Dangerous Goods Regulations)

UN Number or ID Number : 1268

UN Proper Shipping Name :

PETROLEUM DISTILLATES, N.O.S or PETROLEUM PRODUCTS, N.O.S.

Class or division (Transport hazard class) : 3

Packing group : III

Special provisions No.: 223; 955

IATA (Dangerous Goods Regulations)

UN Number or ID Number : 1268

UN Proper Shipping Name :

PETROLEUM DISTILLATES, N.O.S or PETROLEUM PRODUCTS, N.O.S.

Class or division (Transport hazard class) : 3

Hazard labels : Flamm.liquid

Packing group : III

Special provisions No.: A3

Environmental hazards

Marine pollutants (yes/no) : yes

Special precautions for user

Special precautions for user is not applicable.

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

This product is not intended to be carried in bulk.

Rules and regulations on domestic transport

Ship Safety Act

Class 3 : Flammable liquids

Civil Aeronautics Act

Class 3 : Flammable liquids

Section 15. Regulatory Information

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

Poisonous and Deleterious Substances Control Law, Japan

The product is not applicable to Toxic/harmful substances control law, Japan

Industrial Safety and Health Act, Japan

Specified chemicals Gr.2 Specific organic solvents

Ethylbenzene

Organic Solvents Class II

Contained Organic Solvents

Xylene (Mixture of isomers); Solvent naphtha

Chemical Substances requiring Labeling and Deliver of Documents, etc.

Labeling, etc.

Solvent naphtha(Attached table 9-330); 1,2,4-trimethylbenzene(Attached table 9-404);
1,3,5-trimethylbenzene(Attached table 9-404); Xylene (Mixture of isomers)(Attached table 9-136);
Ethylbenzene(Attached table 9-70); Cumene(Attached table 9-138)

Report required substances

Solvent naphtha(Attached table 9-330); 1,2,4-trimethylbenzene(Attached table 9-404);
1,3,5-trimethylbenzene(Attached table 9-404); Xylene (Mixture of isomers)(Attached table 9-136);
Ethylbenzene(Attached table 9-70); Cumene(Attached table 9-138)

Appended Table 1 Dangerous Substances (related to Article 1, 6, and 9-3)

Flammable (30°C ≤ FP < 65°C)

Prevention of health problems guidelines published material, Japan

Ethylbenzene

PRTR law, Japan

Listed chemicals Gr.1

Ethylbenzene(9.0%)[Ethylbenzene(9%)(JPSN 53)];
Trimethylbenzene(24%)[1,2,4-trimethylbenzene(19%)(JPSN 691); 1,3,5-trimethylbenzene(5%)(JPSN 691)];
Xylene(9.0%)[Xylene (Mixture of isomers)(9%)(JPSN 80)];
Cumene(2.0%)[Cumene(2%)(JPSN 83)]

Labor Standards Act, Japan

Chemical substances or compounds (including alloys) causing disease (Regulation, Appended Table 1-2-4-1)

Xylene (Mixture of isomers)

Fire Service Act, Japan

Hazardous materials

Petroleum Gr.2, (Class III) (Designated quantity 1,000L)

Chemical Substances Control Law, Japan

Priority Assessment Chemical Substances (PACSS)

1,2,4-trimethylbenzene(Cabinet order number 49 Human Health / Ecosystem);
Ethylbenzene(Cabinet order number 50 Human Health / Ecosystem);
Xylene (Mixture of isomers)(Cabinet order number 125 Human Health);
Cumene(Cabinet order number 126 Human Health);
1,3,5-trimethylbenzene(Cabinet order number 201 Human Health)

Offensive Odor Control Law, Japan

Xylene (Mixture of isomers)

Cabinet order number 18: Site boundary line tolerance 1 – 5 ppm

Air Pollution Control Law, Japan

Hazardous air pollutants

Xylene (Mixture of isomers)(43 of Central Environment Council 9th Report)

Ethylbenzene(24 of Central Environment Council 9th Report)

Water Pollution Control Law, Japan

Listed substance(s)

Xylene (Mixture of isomers)

Cabinet order number 28

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

Chemicals listed in TSCA Inventory

95-63-6; 98-82-8; 100-41-4; 108-67-8; 1330-20-7; 64742-95-6

Superfund Amendments and Reauthorizations Act (SARA), Title III

SARA 313 (TRI)

Cumene; Ethylbenzene; 1,2,4-trimethylbenzene; Xylene (Mixture of isomers)

California proposition 65

WARNING: This product can expose you to chemical(s), which is(are) known to the State of California to cause cancer, and/or chemical(s), which is (are) known to the State of California to cause birth defects or other reproductive harm.

For more information go to www.P65Warnings.ca.gov.

Cancer

Ethylbenzene (Cancer)

Cumene (Cancer)

Section 16. Other information

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, 2020 Edition (Incorporating Amendment 40-20)

IATA Dangerous Goods Regulations (64th Edition) 2023

2020 EMERGENCY RESPONSE GUIDEBOOK (US DOT)

2023 TLVs and BEIs. (ACGIH)

JIS Z 7252 : 2019

JIS Z 7253 : 2019

2022 Recommendation on TLVs (JSOH)

Notification No. 0111-1 (January 11, 2022), Chemical Hazards Control Division, Industrial Safety and Health Department, Labour Standards Bureau, Ministry of Health, Labour and Welfare

Supplier's data/information

GESTIS-Stoffdatenbank

Pub Chem (OPEN CHEMISTRY DATABASE)

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 GHS classification data given here is based on current Japan official data (NITE published in 2021).