

Safety Data Sheet

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

1.1 Product identifier:

Product name: General Solvent

Product code (SDS NO): General_Solvent_USA_E-2

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

Relevant identified uses of the product: Industrial use

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier: Asahi Graphic Corp.

Address: 4-23-8 Ebisu, Shibuya-ku, Tokyo, 150-0013 Japan

Telephone number: +81-3-5424-3016

FAX: +81-3-5424-3018

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

2. Hazards identification

GHS classification and label elements of the product

2.1 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

Germ cell mutagenicity: Category 1B

Carcinogenicity: Category 1B

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

Specific target organ toxicity – repeated exposure: Category 2

Aspiration hazard: Category 1

ENVIRONMENT HAZARDS

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

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

2.2 Label elements



Signal word: Danger

HAZARD STATEMENT

H226 Flammable liquid and vapor

H315 Causes skin irritation

H319 Causes serious eye irritation

H340 May cause genetic defects

H350 May cause cancer

H335 May cause respiratory irritation

H373 May cause damage to organs through prolonged or repeated exposure

H304 May be fatal if swallowed and enters airways

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/sparks/open flames/hot surfaces. – No smoking.
- P233 Keep container tightly closed.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical/ventilating/lighting equipment.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- 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 and face protection.
- P280 Wear eye protection/face protection.
- P280 Use personal protective equipment as required.

Response

- P370 + P378 In case of fire: Use appropriate media other than water for extinction.
- 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 or doctor/physician if you feel unwell.
- 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/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 or 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.

3. Composition/information on ingredients

Mixture/Substance selection:

3.2 Mixture

Ingredient name	CAS No.	Content (%)
Solvent naphtha	CBI	55 - 60
1,2,4-trimethylbenzene	95-63-6	15 - 20
1,3,5-trimethylbenzene	108-67-8	5 - 10
Xylene (Mixture of isomers)	1330-20-7	5 - 10
Ethylbenzene	100-41-4	5 - 10
Cumene	98-82-8	1 - 5

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

4. First-aid measures

4.1 Descriptions of first-aid measures

General measures

Get medical attention/advice if you feel unwell.

IF exposed or concerned: Get medical attention/advice.

Call a POISON CENTER or doctor/physician 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 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 or doctor/physician.

4.3 Indication of any immediate medical attention and special treatment needed

Specific treatment is required.

5. Fire-fighting measures

5.1 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.

5.2 Specific hazards arising from the substance or mixture

Will form toxic carbon oxides upon combustion.

5.3 Advice for firefighters

Specific fire-fighting measures

Evacuate non-essential personnel to safe area.

Eliminate all ignition sources if safe to do so.

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/flare 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.

6. Accidental release measures

6.1 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.

6.2 Environmental precautions

Prevent spills from entering sewers, watercourses or low areas.

6.3 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.

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.

7. Handling and storage

7.1 Precautions for safe handling

Preventive measures

(Exposure Control for handling personnel)

Do not breathe gas/mist/vapors/spray.

Avoid breathing gas/mist/vapors/spray.

(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.

Wear protective gloves and face protection.

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

Wash contaminated parts thoroughly after handling.

Take off contaminated clothing and wash it before reuse.

7.2 Storage

Conditions for safe storage

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

Store locked up.

8. Exposure controls/personal protection

8.1 Control parameters

Adopted value

(Ethylbenzene)

ACGIH(2010) TWA: 20ppm

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

(Xylene (Mixture of isomers))

ACGIH(1992) TWA: 100ppm

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

(Cumene)

ACGIH(1997) TWA: (50ppm) (Eye, skin & URT irr; CNS impair)

OSHA-PEL

(Cumene)

TWA: 50ppm, 245mg/m³

(Ethylbenzene)

TWA: 100ppm, 435mg/m³

(Xylene (Mixture of isomers))

TWA: 100ppm, 435mg/m³

NIOSH-REL

(Cumene)

TWA: 50ppm

(Ethylbenzene)

TWA: 100ppm; STEL:125ppm

(Xylene (Mixture of isomers))

TWA: 100ppm; STEL: 150ppm

California proposition 65

cancer NSRL

(Ethylbenzene)

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

8.2 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.

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

9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Physical state: Liquid

Color: Colorless

Odor: Petroleum odor

Boiling point or initial boiling point: 130°C

Flash point: (Closed cup)39°C

Auto-ignition temperature: 432°C

Lower and upper explosion limit/flammability limit:

Lower explosion limit: 0.6vol %

Upper explosion limit: 7vol %

Relative vapor density (Air=1): 4.1

Density and/or relative density: 0.88(20°C)

Dynamic viscosity: 20.1mPas(20°C)

Kinematic viscosity: 17.5mm²/s(40°C)

Solubility:

Solubility in water: Insoluble

10. Stability and Reactivity

10.2 Chemical stability

Stable under normal storage/handling conditions.

10.3 Possibility of hazardous reactions

May form explosive gaseous mixture with air.

10.5 Incompatible materials

Strong oxidizing agents

10.6 Hazardous decomposition products

Carbon oxides

11. Toxicological Information

11.1 Information on toxicological effects

Acute toxicity data is not available.

Irritant properties

Skin corrosion/irritation data is not available.

Serious eye damage/irritation data is not available.

Allergenic and sensitizing effects data is not available.

Mutagenic effects data is not available.

Carcinogenicity

(Ethylbenzene)

IARC-Gr.2B : Possibly carcinogenic to humans

(Xylene (Mixture of isomers))

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

(Cumene)

IARC-Gr.2B : Possibly carcinogenic to humans

(Ethylbenzene)

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

(Xylene (Mixture of isomers))

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

(Solvent naphtha)

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

Teratogenic effects data is not available.

Reproductive toxicity data is not available.

STOT

STOT—single exposure data is not available.

STOT—repeated exposure

[cat.2]

[EU CLP name of STOT]

(Ethylbenzene)

hearing organs

Aspiration hazard data is not available.

12. Ecological Information

12.1 Ecotoxicity

Aquatic toxicity

Toxic to aquatic life with long lasting effects

Water solubility

(Ethylbenzene)

0.015 g/100 ml (20°C) (ICSC, 2007)

(1,3,5-trimethylbenzene)

very poor (ICSC, 2002)

(1,2,4-trimethylbenzene)

very poor (ICSC, 2002)

(Cumene)

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

12.2 Persistence and degradability

(1,2,4-trimethylbenzene)

BOD_Degradation : 4–18% (Registered chemicals data check & review, 1977)

(Ethylbenzene)

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

(1,3,5-trimethylbenzene)

BOD_Degradation : 0% (Registered chemicals data check & review)

(Xylene (Mixture of isomers))

Not degrade rapidly (BOD_Degradation : 39% (NITE primary risk assessment, 2005))

(Cumene)

Not degrade rapidly (Degradation : 13% (84/449/EEC))

12.3 Bioaccumulative potential

(Ethylbenzene)

log Kow=3.15 (PHYSPROP DB, 2005)

(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)

(1,2,4-trimethylbenzene)

log Pow=3.8 (ICSC, 2002)

(Cumene)

log Pow=3.66 (PHYSPROP DB, 2005)

12.4 Mobility in soil

Mobility in soil data is not available.

12.6 Other adverse effects

Ozone depleting chemical data is not available.

13. Disposal considerations

13.1 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.

Dispose to an authorized waste collection point.

14. Transport Information

UN No., UN CLASS

14.1 UN No.: 1268

14.2 Proper Shipping Name :

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

14.3 Class or division : 3

14.4 Packing group : III

ERG GUIDE No.: 128

Special provisions No.: 223

IMDG Code (International Maritime Dangerous Goods Regulations)

14.1 UN No.: 1268

14.2 Proper Shipping Name :

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

14.3 Class or division : 3

14.4 Packing group : III

Special provisions No.: 223; 955

IATA Dangerous Goods Regulations

14.1 UN No.: 1268

14.2 Proper Shipping Name :

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

14.3 Class or division : 3

Hazard labels : Flamm.liquid

14.4 Packing group : III

Special provisions No.: A3

14.5 Environmental hazards

MARPOL Annex III – Prevention of pollution by harmful substances

Marine pollutants (yes/no) : yes

MARPOL Annex V – Prevention of pollution by garbage discharge

Germ cell mutagenicity: cat.1, 1A, 1B

Solvent naphtha

Carcinogenicity: cat.1, 1A, 1B

Solvent naphtha

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

1,2,4-trimethylbenzene , 1,3,5-trimethylbenzene , Cumene

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

Noxious Liquid ; Cat. X

1,3,5-trimethylbenzene; 1,2,4-trimethylbenzene

Noxious Liquid ; Cat. Y

Ethylbenzene; Xylene (Mixture of isomers)

15. Regulatory Information

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

US major regulations

TSCA

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

California proposition 65

Cancer

Cumene; Ethylbenzene

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.

16. Other information

GHS classification and labelling

Flam. Liq. 3: H226 Flammable liquid and vapor

Skin Irrit. 2: H315 Causes skin irritation

Eye Irrit. 2: H319 Causes serious eye irritation

Muta. 1B: H340 May cause genetic defects

Carc. 1B: H350 May cause cancer

STOT SE 3: H335 May cause respiratory irritation

STOT RE 2: H373 May cause damage to organs through prolonged or repeated exposure

Asp. Tox. 1: H304 May be fatal if swallowed and enters airways

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>

Supplier's data/information

Hazard Communication Standard – 2012 (29 CFR 1910.1200)

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 EU official data (EU CLP published in 01.03.2018).