

Safety Data Sheet

according to Regulation (EC) No.1907/2006 (REACH), amended by COMMISSION REGULATION (EU) 2020/878

Product name : General Solvent

Date of revision : 09/Mar/2023

SDS No. : AG_General_Solvent_EU-2

Date previous version : 28/Feb/2023

Revision No. : 2

Previous version : 1

Section 1. Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier:**

Product name: General Solvent

Product code (SDS NO): AG_General_Solvent_EU-1

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 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

1.4 Emergency telephone number: +81-3-5424-3016**Section 2. Hazards identification**

GHS classification and label elements of the product

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No.1272/2008 [CLP]

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)

Aspiration hazard: Category 1

ENVIRONMENT HAZARDS

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

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

2.2 Label elements

Labelling according to Regulation (EC) No.1272/2008 [CLP]



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

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, 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.
- 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.

Response

- P370 + P378 In case of fire: Use appropriate media to extinguish.
- P391 Collect spillage.
- P321 Specific treatment is required.
- P308 + P313 IF exposed or concerned: Get medical advice/attention.
- P312 Call a POISON CENTER/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 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.

2.3 Other hazards

- The product does not contain any ingredient designated as PBT and/or vPvB.
- The product does not contain any ingredients designated as Endocrine disrupting properties.

Section 3. Composition/information on ingredients

Mixture/Substance selection:

3.2 Mixture

Ingredient name	CAS No.	Content (%)
Classification according to REGULATION (EC) No.1272/2008 [CLP]	ECNO	
Solvent naphtha	64742-95-6	55 - 60
Carc. 1B, H350; Muta. 1B, H340; Asp. Tox. 1, H304 [SCL's, M-Factors, ATE, Component notes] note:[P]	265-199-0	
1,2,4-trimethylbenzene	95-63-6	15 - 20
Flam. Liq. 3, H226; Acute Tox. 4 *, H332; STOT SE 3, H335; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Aquatic Chronic 2, H411	202-436-9	
1,3,5-trimethylbenzene	108-67-8	5 - 10
Flam. Liq. 3, H226; STOT SE 3, H335; Aquatic Chronic 2, H411 [SCL's, M-Factors, ATE, Component notes] STOT SE 3; H335: C >= 25 %	203-604-4	
Xylene (Mixture of isomers)	1330-20-7	5 - 10
Flam. Liq. 3, H226; Acute Tox. 4 *, H332; Acute Tox. 4 *, H312; Skin Irrit. 2, H315 [SCL's, M-Factors, ATE, Component notes] *;note:[C]	215-535-7	
Ethylbenzene	100-41-4	5 - 10
Flam. Liq. 2, H225; Acute Tox. 4 *, H332; Asp. Tox. 1, H304; STOT RE 2, H373 (hearing organs)	202-849-4	
Cumene	98-82-8	1 - 5
Flam. Liq. 3, H226; Carc. 1B, H350; Asp. Tox. 1, H304; STOT SE 3, H335; Aquatic Chronic 2, H411	202-704-5	

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

Components contributing to the hazard

The product does not contain any ingredients listed in REACH SVHC candidate list.

Full text of classifications and hazard statements: see section 16

Section 4. First-aid measures

4.1 Descriptions of first-aid measures

General measures

IF exposed or concerned: Get medical advice/attention.

Call a POISON CENTER/doctor/physician 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 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.

4.2 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

4.3 Indication of any immediate medical attention and special treatment needed

Specific treatment is required.

Section 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.

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 full face piece operated positive pressure mode.

Section 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.

Do not wash away into sewers or waterway.

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.

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.

6.4 Reference to other sections

- Refer to section 8
- Refer to section 13

Section 7. Handling and storage**7.1 Precautions for safe handling****Preventive measures**

(Exposure Control for handling personnel)

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.

7.2 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.

7.3 Specific end use(s)

Information on Specific end use(s) is not available.

Section 8. Exposure controls/personal protection**8.1 Control parameters**

Adopted value

(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

EU Occupational exposure limit values (Workplace Exposure limits) compliant to relevant EU

Directive through 91/332/EEC to 2019/1831/EU

(1,2,4-trimethylbenzene)

LTEL: 100mg/m³; 20ppm

(1,3,5-trimethylbenzene)

STEL: 100mg/m³; 20ppm

(Xylene (Mixture of isomers))

LTEL: (Pure) 221mg/m³; 50ppmSTEL: (Pure) 442mg/m³; 100ppm (SKIN)

(Ethylbenzene)

LTEL: 442mg/m³; 100ppmSTEL: 884mg/m³; 200ppm (SKIN)

(Cumene)

LTEL: 50mg/m³; 10ppmSTEL: 250mg/m³; 50ppm (SKIN)**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.

Section 9. Physical and Chemical Properties**9.1 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

9.2 Other information

Other information is not available.

Section 10. Stability and Reactivity**10.1 Reactivity**

Reactivity data is not available.

10.2 Chemical stability

Stable under normal storage/handling conditions.

10.3 Possibility of hazardous reactions

Vapors may catch fire and explode.

10.4 Conditions to avoid

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

10.5 Incompatible materials

Strong oxidizing agents

10.6 Hazardous decomposition products

The following substances are produced by pyrolysis.

Carbon oxides

Section 11. Toxicological Information

The product has not been subjected to toxicological testing. Refer to the available data on the constituents.

11.1 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]

No data available.

Acute toxicity (Dermal)

[Product]

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

[Data for components of the product]

[Table 3 of Annex VI to the CLP Regulations]

(Xylene (Mixture of isomers))

Category 4

Acute toxicity (Inhalation)

[Product]

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

[Data for components of the product]

[Table 3 of Annex VI to the CLP Regulations]

(1,2,4-trimethylbenzene)

Category 4

(Xylene (Mixture of isomers))

Category 4

(Ethylbenzene)

Category 4

Irritant properties**Skin corrosion/irritation**

[Product]

Category 2, Causes skin irritation

[Data for components of the product]

[Table 3 of Annex VI to the CLP Regulations]

(1,2,4-trimethylbenzene)

Category 2

(Xylene (Mixture of isomers))

Category 2

Serious eye damage/irritation

[Product]

Category 2, Causes serious eye irritation

[Data for components of the product]

[Table 3 of Annex VI to the CLP Regulations]

(1,2,4-trimethylbenzene)

Category 2

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]

Category 1B, May cause genetic defects

[Data for components of the product]

[Table 3 of Annex VI to the CLP Regulations]

(Solvent naphtha)

Category 1B

Carcinogenicity

[Product]

Category 1B, May cause cancer

[Data for components of the product]

[Table 3 of Annex VI to the CLP Regulations]

(Solvent naphtha)

Category 1B

(Cumene)

Category 1B

[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

(Ethylbenzene)

A3(2021) : Confirmed Animal Carcinogen with Unknown Relevance to Humans

(Cumene)

A3(2020) : Confirmed Animal Carcinogen with Unknown Relevance to Humans

Reproductive toxicity

[Product]

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

[Data for components of the product]

No data available.

Specific target organ toxicity (STOT)

STOT-single exposure

[Product]

Category 3, May cause respiratory irritation

[Data for components of the product]

[cat.3 (respiratory tract irritation)]

[Table 3 of Annex VI to the CLP Regulations]

(1,2,4-trimethylbenzene)

Category 3, Respiratory tract irritation

(1,3,5-trimethylbenzene)

Category 3, Respiratory tract irritation

(Cumene)

Category 3, Respiratory tract irritation

STOT-repeated exposure

[Product]

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

[Data for components of the product]

[cat.2]

[Table 3 of Annex VI to the CLP Regulations]

(Ethylbenzene)

hearing organs

Aspiration hazard

[Product]

Category 1, May be fatal if swallowed and enters airways

[Data for components of the product]

[cat.1]

[Table 3 of Annex VI to the CLP Regulations]

(Solvent naphtha)

Category 1

(Ethylbenzene)

Category 1

(Cumene)

Category 1

11.2 Information on other hazards

Endocrine disrupting properties is not available.

Section 12. Ecological Information

The product has not been subjected to ecotoxicological testing. Refer to the available data on the constituents.

12.1 Toxicity

Aquatic toxicity

[Product]

Category 2, Toxic to aquatic life with long lasting effects

[Data for components of the product]

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

[Table 3 of Annex VI to the CLP Regulations]

(1,2,4-trimethylbenzene)

Category 2

(1,3,5-trimethylbenzene)

Category 2

(Cumene)

Category 2

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)

12.2 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% (84/449/EEC))

12.3 Bioaccumulative potential

[Data for components of the product]

(1,2,4-trimethylbenzene)

log Pow=3.8 (ICSC, 2002)

(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)

12.4 Mobility in soil

Mobility in soil data is not available.

12.5 Results of PBT and vPvB assessment

PBT and/or vPvB assessment data is not available.

12.6 Endocrine disrupting properties

Endocrine disrupting properties is not available.

12.7 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

13.1 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**

14.1 UN Number or ID Number : 1268

14.2 UN Proper Shipping Name :

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

14.3 Class or division (Transport hazard class) : 3

14.4 Packing group : III

ERG GUIDE No.: 128

Special provisions No.: 223

ADR (European Agreement concerning the International Carriage of Dangerous Goods by Road)

14.1 UN Number or ID Number : 1268

14.2 UN Proper Shipping Name :

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

14.3 Class or division (Transport hazard class) : 3

Label : 3

14.4 Packing group : III

Special provisions : 664

ADN (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)

14.1 UN Number or ID Number : 1268

14.2 UN Proper Shipping Name :

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

14.3 Class or division (Transport hazard class) : 3

Label : 3

14.4 Packing group : III

RID (Regulation concerning the International Carriage of Dangerous goods by Rail)

14.1 UN Number or ID Number : 1268

14.2 UN Proper Shipping Name :

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

14.3 Class or division (Transport hazard class) : 3

Label : 3

14.4 Packing group : III

IMDG Code (International Maritime Dangerous Goods Regulations)

14.1 UN Number or ID Number : 1268

14.2 UN Proper Shipping Name :

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

14.3 Class or division (Transport hazard class) : 3

14.4 Packing group : III

Special provisions No.: 223; 955

IATA (Dangerous Goods Regulations)

14.1 UN Number or ID Number : 1268

14.2 UN Proper Shipping Name :

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

14.3 Class or division (Transport hazard class) : 3

Hazard labels : Flamm.liquid

14.4 Packing group : III

Special provisions No.: A3

14.5 Environmental hazards

Marine pollutants (yes/no) : yes

14.6 Special precautions for user

Special precautions for user is not applicable.

14.7 Maritime transport in bulk according to IMO instruments

This product is not intended to be carried in bulk.

Section 15. Regulatory Information

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

The product does not contain any ingredients listed in REACH SVHC candidate list.

Other information is not available.

Other regulatory information

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

15.2 Chemical safety assessment

Advice on safe handling for this product can be found in sections 7 and 8 of this SDS.

Section 16. Other information

GHS classification and labelling

Flammable liquids, Category 3: H226 Flammable liquid and vapour

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 1B: H340 May cause genetic defects

Carcinogenicity, Category 1B: H350 May cause cancer

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

Aspiration hazard, Category 1: H304 May be fatal if swallowed and enters airways

Hazardous to the aquatic environment, long-term (chronic), Category 2: H411 Toxic to aquatic life with long lasting effects

Full text of Hazard categories and Hazard statements referred to only section 3

Flam. Liq. 2, H225 – Flammable liquids, Category 2: H225 Highly flammable liquid and vapour

Acute Tox. 4, H312 – Acute toxicity, Category 4: H312 Harmful in contact with skin

Acute Tox. 4, H332 – Acute toxicity, Category 4: H332 Harmful if inhaled

STOT RE 2, H372 – STOT – Repeated exposure, Category 2: H373 May cause damage to organs through prolonged or repeated exposure

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

EU REGULATION (EC) No. 1272/2008 (CLP), amended by COMMISSION REGULATION (EU) 2019/521

2020 EMERGENCY RESPONSE GUIDEBOOK (US DOT)

2022 TLVs and BEIs. (ACGIH)

Supplier's data/information

GESTIS-Stoffdatenbank

Pub Chem (OPEN CHEMISTRY DATABASE)

Abbreviations and acronyms

ACGIH – American Conference of Governmental Industrial Hygienists; ADN – European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR – European Agreement concerning the International Carriage of Dangerous Goods by Road; ATE – Acute Toxicity Estimate; BCF – Bioconcentration Factor; BOD – Biochemical Oxygen Demand; Cat. – Category; Ceiling-C – Ceiling value; CLP – Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures; COD – Chemical Oxygen Demand; DSEN – Dermal Sensitization; EC No. – The European Community number; EC50 – Effective Concentration 50; EU – European Union; GHS – Globally Harmonized System of

Classification and Labelling of Chemicals; IARC – International Agency for Research on Cancer; IATA – International Air Transport Association; IBC Code – International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IMDG Code – International Maritime Dangerous Goods Code; LC50 – Lethal Concentration 50; LD50 – Lethal Dose 50; logPow – n-Octanol/water Partition Coefficient; LTEL – eight-hour time weighted average; MARPOL – International Convention for the Prevention of Pollution from Ships; M-factor – Multiplying factors; NOEC – No Observed Effect Concentration; NTP – National Toxicology Program; PBT – Persistent, Bioaccumulative and Toxic substances; REACH – Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No.1907/2006; RID – Regulation concerning the International Carriage of Dangerous goods by Rail; RSEN – Respiratory Sensitization; SCL – Specific Concentration Limit; Skin – Danger of cutaneous absorption; STEL – Short-term Exposure Limit; STOT – Specific target organ toxicity; SVHC – Substance of Very High Concern; TWA – time-weighted average; UN – United Nations; vPvB – Very Persistent and very Bioaccumulative substances
CNS – central nervous system; eff – effects; impair – impairment; irr – irritation; OTO – Ototoxicant; URT – upper respiratory tract

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 (Consolidated version of the CLP Regulation published in 17/12/2022 and Commission delegated regulation (EU) 2022/692 (ATP18)).