SDS(Safety Data Sheet)

Product	Techsol-100		
MSDS Number	List No.	Issuing date	Last revised date
-	AR0011	2008-07-25	2026-06-09

1. IDENTIFICATION

1) Product name

Techsol-100

2) Recommended use of the chemical and restriction on use

- Recommended use: Thinner, Pesticide
- Restrictions on use: Do not use for any other purpose.

3) Details of the supplier of the safety data sheet

○ **Manufacturer**

- Company name: GS Caltex Corporation
- Address: GS Tower, 508, Nonhyeon-ro, Gangnam-gu, Seoul, Korea
- Emergency telephone number: 1544-5151

2. HAZARDS IDENTIFICATION

1) Classification of the product

FLAMMABLE LIQUIDS : Category 3

SKIN CORROSION/IRRITATION : Category 2

SERIOUS EYE DAMAGE/EYE IRRITATION : Category 2

CARCINOGENICITY : Category 2

SPECIFIC TARGET ORGAN TOXICITY FOLLOWING SINGLE EXPOSURE : Category 3(Narcotic effects)

SPECIFIC TARGET ORGAN TOXICITY FOLLOWING REPEATED EXPOSURE : Category 2

LONG-TERM HAZARDS TO THE AQUATIC ENVIRONMENT : Category 2

2) Label elements

○ **Hazard pictograms**

○ **Signal word**

Warning

○ **Hazard statements**

- H226 Flammable liquid and vapour.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H336 May cause drowsiness or dizziness.

- H351 Suspected of causing cancer.(inhalation)
- H373 May cause damage to organs through prolonged or repeated exposure. (inhalation)
- H411 Toxic to aquatic life with long lasting effects.

○ **Precautionary statements**

1) Prevention

- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- 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 precautionary measures against static discharge.
- P260 Do not breathe dust/fume/gas/mist/vapours/spray.
- P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
- P264 Wash ... thoroughly after handling.
- P271 Use only outdoors or in a well-ventilated area.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

2) Response

- P302 + P352 IF ON SKIN: Wash with plenty of water/cleansing agent.
- P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P304 + P340 IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P308 + P313 IF exposed or concerned: Get medical advice/attention.
- P312 Call a POISON CENTER or doctor/physician if you feel unwell.
- P314 Get medical advice/attention if you feel unwell.
- P321 Specific treatment (see section 5).
- P332 + P313 If skin irritation occurs: Get medical advice/attention.
- P337 + P313 If eye irritation persists: Get medical advice/attention.
- P362 + P364 Take off contaminated clothing and wash it before reuse.
- P370 + P378 In case of fire: Use manufacturer/supplier or the competent authority to specify appropriate media for extinction.
- P391 Collect spillage.

3) Storage

- P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
- P403 + P235 Store in a well-ventilated place. Keep cool.
- P405 Store locked up.

4) Disposal

- P501 Dispose of contents/container to ....

3) Other hazards

○ **Product NFPA Level**

(※ 0-Lack, 1-Low, 2-Moderate, 3-High, 4-Very High)

Product name	Health	Flammable	Reaction
Techsol-100	2	2	0

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	Trade names and Synonyms	CAS No.	EC No.	Contain Ratio(%)
Solvent naphtha (petroleum), light arom.	Naphtha	64742-95-6	265-199-0	100
* 다음의 물질이 포함되어 있음				
Trimethyl benzene	Trimethyl benzene;Benzene, trimethyl (isomers);C9 aromatic hydrocarbon fraction	25551-13-7	247-099-9	50
Xylene	Methyltoluene;Xylol	1330-20-7	215-535-7	5
(1-Methylethyl)benzene	2-Phenylpropane ; Cumol ; i-Propylbenzene	98-82-8	202-704-5	1 ~ 2

4. FIRST AID MEASURES

1) Eye contact

- Get medical attention immediately.
- In case of contact with substance, immediately flush eyes with running water for at least 20 minutes.
- 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.

2) Skin contact

- In case of contact with substance, immediately flush skin with running water for at least 20 minutes.
- In case of burns, immediately cool affected skin for as long as possible with cold water. Do not remove clothing if adhering to skin.
- Immediately call a POISON CENTER or doctor/physician.
- If skin irritation occurs: Get medical advice/attention.
- Take off immediately all contaminated clothing and wash it before reuse.

3) Inhalation

- Do not use mouth-to-mouth method if victim inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.
- Administer oxygen if breathing is difficult.
- IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
- IF exposed or concerned: Get medical advice/attention.

4) Ingestion

- Do not use mouth-to-mouth method if victim ingested the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

- IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

5) Indication of any immediate medical attention and special treatment needed

- Exposures require specialized first aid with contact and medical follow-up.
- Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

5. FIRE FIGHTING MEASURES

1) Suitable (and unsuitable) extinguishing media

- Use alcohol foam, carbon dioxide, or water spray when fighting fires involving this material.
- Use dry sand or earth to smother fire.
- For mixtures containing alcohol or polar solvent: Alcohol-resistant foam
- High-pressure water (Unsuitable extinguishing media)
- Direct water (Unsuitable extinguishing media)

2) Special hazards arising from the substance or mixture

- Can form explosive mixtures at temperatures at or above the flashpoint.
- Fire may produce irritating, corrosive and/or toxic gases.
- Flammable liquid and vapour.
- Heating may cause a fire or explosion.

3) Special protective equipment and precautions for firefighters

- Rescuers should put on appropriate protective gear.
- Fire involving Tanks: For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.
- In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.
- Eliminate all ignition sources if safe to do so.

6. ACCIDENTAL RELEASE MEASURES

1) Health considerations and protective equipment

- Clean up spills immediately, observing precautions in Protective Equipment section.
- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
- All equipment used when handling the product must be grounded.
- Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
- Please note that materials and conditions to be avoided.

2) Environmental precautions

- Large spill: Prevent entry into waterways, sewers, basements or confined areas.
- Avoid release to the environment.

3) Methods and material for containment and cleaning up

- Dike and collect water used to fight fire.
- Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container.
- Absorb the liquid and scrub the area with detergent and water.
- Large Spill: Dike far ahead of liquid spill for later disposal.
- Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry.

7. HANDLING AND STORAGE

1) Precautions for safe handling

- Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition.
- Follow all MSDS/label precautions even after container is emptied because they may retain product residues.
- Avoid prolonged or repeated contact with skin.
- Avoid breathing vapors from heated material.
- All equipment used when handling the product must be grounded.
- Please note that materials and conditions to be avoided.
- Handling refer to engineering control/personal protection section.
- Wash thoroughly after handling.
- Use only outdoors or in a well-ventilated area.

2) Conditions for safe storage (including any incompatibilities)

- Please note that materials and conditions to be avoided.
- Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- Store in a well-ventilated place. Keep container tightly closed.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

1) Control parameters

Chemical name	Exposure limits	ACGIH TLV	OSHA PEL	Biological limit values(BLV)
Solvent naphtha (petroleum), light arom.	TWA : 0.8 mg/m3	Not available	Not available	Not available
Trimethyl benzene	TWA : 25 ppm	TWA 10 ppm	Not available	Not available
Xylene	TWA : 100 ppm STEL : 150 ppm	TWA 20 ppm	PEL: 100 ppm, 435 mg/m3 mg/m3	Not available
(1-Methylethyl)benzene	TWA : 50 ppm	TWA 5 ppm	PEL: 50 ppm, 245 mg/m3 mg/m3	Not available

2) Appropriate engineering controls

- Install local exhaust ventilation system.
- Check legal suitability of exposure level.

3) Personal protection equipment

○ **Respiratory protection**

- If exposure consentration of the material is lower than 100 ppm of the permitted exposure standards, Wear a respiratory protective device, equipped with an adequate filter by considering physicochemical properties of exposured particulate material ; such
- If exposure consentration of the paticle material is lower than 250 ppm of the permitted exposure standards, Wear a respiratory protective device, equipped with

an adequate filter by considering physicochemical properties of exposured particulate material

- If exposure consentration of the particle material is lower than 500 ppm of the permitted exposure standards, Wear a respiratory protective device, equipped with an adequate filter by considering physicochemical properties of exposured particulate materia
- If exposure consentration of the particle material is lower than 10000 ppm of the permitted exposure standards, Wear a respiratory protective device, equipped with an adequate filter by considering physicochemical properties of exposured particulate mater
- If exposure consentration of the material is lower than 100000 ppm of the permitted exposure standards, Wear a respiratory protective device, equipped with an adequate filter by considering physicochemical properties of exposured particulate material ; su
- If exposure consentration of the material exceeds the permitted exposure standards, Wear European Standard EN 149 approved full or half face piece (with goggles) respireatory protective equipment.

○ **Eye protection**

- An eye wash unit and safety shower station should be available nearby work place.
- Wear breathable safety goggles to protect from vapour state organic material causing eye irritation or other disorder.

○ **Hand protection**

- Wear appropriate protective gloves by considering physical and chemical properties of chemicals.

○ **Body protection**

- Wear appropriate protective clothing by considering physical and chemical properties of chemicals.

9. PHYSICAL AND CHEMICAL PROPERTIES

Item	Input Value
Apperance	Liquid
Color	No Data
Smell	Aromatic Hydrocarbon odor
Smell Threshold	No Data
pH (Numerical value)	No Data
Melting/Freezing Point	No Data
Boilling Point	155 ~ 181 ℃
Flash Point	44.5 ℃
Evaporating Rate	23
Flammability(Solid, Gas)	No Data
Explosibility Range	1.0 ~ 7.0
Steam Pressure	5.6

Solubility	No Data
Vapor Density	4.3
Specific Gravity	0.86~0.88
Distribution Coefficient	No Data
SelfIgnition Temperature	>450
Pyrolysis Temperature	No Data
Viscosity	0.88 mm2/s (at 40℃)
Molecular Weight	No Data

10. STABILITY AND REACTIVITY

1) Chemical Stability and hazardous reactivity
- Can form explosive mixtures at temperatures at or above the flashpoint.
- HIGHLY FLAMMABLE: Will be easily ignited by heat, sparks or flames.
- Fire may produce irritating, corrosive and/or toxic gases.

2) Conditions to avoid - Ignition source(heat, spark, flame, friction, shock, contamination)

3) Incompatible materials - Combustibles

4) Hazardous decomposition products - During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

11. TOXICOLOGICAL INFORMATION

1) Information on the likely routes of exposures

○ **Inhalation**

- No inhalation effects through respiratory system.

○ **Skin contact**

- Causes skin irritation.
- Absorbable through the skin

○ **Eye contact**

- Causes serious eye irritation.
- Possible exposure through the eye

○ **Ingestion**

- No ingestion effect through mouth.

2) Health hazard information

○ **Acute toxicity**

*** Oral - Not classified (ATEmix > 2000 mg/kg)**

- Solvent naphtha (petroleum), light arom. : rat(male/female); LD50 > 5000 ㎎/kg bw, no deaths (OECD TG 401, GLP) (read across: low viscosity liquid hydrocarbon) (ECHA)
- Trimethyl benzene : rat; LD50 = 8970 mg/kg bw (HSDB)
- Xylene : LD50(rat, male)=3,523 mg/kg bw (mixed isomers: 60.2% m-xylene, 13.6% p-xylene, 9.1% o-xylene, and 17.0% ethylbenzene) (EU Method B.1) (ECHA)

- (1-Methylethyl)benzene : Rat(Female/Male); LD50 = 2700 mg/kg (OECD TG 401) (ECHA)

*** Dermal - Not classified (ATEmix > 2000 mg/kg)**

- Solvent naphtha (petroleum), light arom. : rabbit(male/female); LD50 > 2000 mg/kg bw, no deaths (OECD TG 402, GLP) (read across: low viscosity liquid hydrocarbon) (ECHA)
- Trimethyl benzene : Not available
- Xylene : rabbit(male); LD50 = 12126 mg/kg (read across: m-xylene) (ECHA)
- (1-Methylethyl)benzene : Rabbit(Female/Male); LD50 > 3160 mg/kg (ECHA)

*** Inhalation(Gas) - Not applicable**

- Solvent naphtha (petroleum), light arom. : Not applicable
- Trimethyl benzene : Not applicable
- Xylene : Not applicable
- (1-Methylethyl)benzene : Not applicable

*** Inhalation(Vapour) - Not classified (ATEmix > 20 mg/L)**

- Solvent naphtha (petroleum), light arom. : rat(male/female); inhalation: vapour; LC50 > 5.610 mg/L air /4h, no deaths (OECD TG 403, GLP) (read across: low viscosity liquid hydrocarbon) (ECHA)
- Trimethyl benzene : Not available
- Xylene : 4h-LC50(rat)=4,550 ppm(unit conversion: 4h-LC50(rat)=19.71 mg/L (HSDB)
- (1-Methylethyl)benzene : Mouse; inhalation: Vapours, LC50 = 13.2287 mg/L 4h (ECHA)

*** Inhalation(Dust, mist) - Not classified (ATEmix > 5 mg/L)**

- Solvent naphtha (petroleum), light arom. : Not available
- Trimethyl benzene : Not available
- Xylene : Not available
- (1-Methylethyl)benzene : Not available

○ Skin corrosion/Irritation : Category 2 (SKIN IRRITATION Cat.2)

- Solvent naphtha (petroleum), light arom.	:	rabbit; irritating (OECD TG 404, GLP) (read across: API 91-01 unleaded gasoline) (ECHA)
- Trimethyl benzene	:	Liquid trimethyl benzene was a primary skin irritant. (HSDB)
- Xylene	:	The skin corrosion potential was determined by exposing the intact skin of six rabbits to p-xylene for four hours. The sites of application were not destroyed or changed irreversibly during or after the exposure. CHEVRON PARAXYLENE 99% was considered not to be corrosive to the intact skin of rabbits. primary dermal irritation index (PDII) : 3 (EU Method B.4) (ECHA)
- (1-Methylethyl)benzene	:	Rabbit; not irritating (OECD TG 404)(ECHA)

○ Serious eye damage/irritation : Category 2 (EYE IRRITATION Cat. 2)

- Solvent naphtha (petroleum), light arom.	:	rabbit; not irritating (OECD TG 405, GLP) (read across: low viscosity liquid hydrocarbon) (ECHA)
- Trimethyl benzene	:	Irritates the eyes (HSDB)
- Xylene	:	The available data indicate that mixed xylene and the individual isomers (m-, o- and p-xylene) should be considered to be irritating to skin, eyes and the respiratory tract. : induces serious eye irritation. (ECHA)
- (1-Methylethyl)benzene	:	Rabbit; not irritating (OECD TG 405) (ECHA)

○ Respiratory sensitization : Not classified

- Solvent naphtha (petroleum), light arom.	:	Not available

- Trimethyl benzene : Not available
- Xylene : Not available
- (1-Methylethyl)benzene : Not available

○ **Skin sensitization : Not classified**

- Solvent naphtha (petroleum), light arom. : guinea pig; not sensitising (OECD TG 406, GLP) (read across: low viscosity liquid hydrocarbon) (ECHA)
- Trimethyl benzene : Not available
- Xylene : mouse; not sensitising (OECD TG 429, GLP) (ECHA)
- (1-Methylethyl)benzene : Guinea pig; not sensitizing (OECD TG 406) (ECHA)

○ **Carcinogenicity : Category 2**

- Solvent naphtha (petroleum), light arom. : EU CLP 1272/2008 : Carc. 1B (Note P : The classification as a carcinogen need not apply if it can be shown that the substance contains less than 0,1 % w/w benzene(EINECS No 200-753-7).
- Trimethyl benzene : IARC, EU CLP 1272/2008, OSHA, ACGIH, US EPA IRIS, NTP : not listed
- Xylene : The key chronic study was conducted by NTP (1986). The study comprises the oral gavage administration of mixed xylenes(60.2% m-xylene, 13.6% p-xylene, 9.1% o-xylene, and 17% ethylbenzene) to rats (0, 250, or 500 mg/kg/day) and mice (0, 500 or 1000 mg/kg/day) for 5 days/week for 103 weeks. There was no evidence of carcinogenicity. No studies are available regarding cancer in animals exposed via inhalation to mixed xylene or the individual xylene isomers. (EU Method B.32) (ECHA)
  IARC, OSHA, NTP, IRIS, ACGIH, EU CLP 1272/2008 : not listed
  ACGIH: A4
- (1-Methylethyl)benzene : IARC : 2B
  NTP : R

○ **Germ cell mutagenicity : Not classified**

- Solvent naphtha (petroleum), light arom. : EU CLP 1272/2008 : Muta. 1B : (Note P : The classification as a mutagen need not apply if it can be shown that the substance contains less than 0,1 % w/w benzene(EINECS No 200-753-7).
  In vitro Bacterial Reverse Mutation Assay : negative (read across: low viscosity liquid hydrocarbon) (ECHA), In Vitro Sister Chromatid Exchange Assay in Mammalian Cells : negative (read across) (ECHA)
  In vivo micronucleus assay : negative (EPA OPPTS 870.5395, GLP) (ECHA)
- Trimethyl benzene : Not available
- Xylene : in vitro mammalian chromosome aberration test: negative (EU Method B.10) (ECHA), In vitro sister chromatid exchange assay in mammalian cells : negative (EU Method B.19) (ECHA)
  In vivo rodent dominant lethal assay: negative (OECD TG 478) (mixed xylenes) (ECHA)
- (1-Methylethyl)benzene : In vitro; bacterial reverse mutation assay: negative (OECD TG 471, GLP) (ECHA)
  in vitro; Rat Liver cell DNA damage and/or repair test and Unscheduled DNA Synthesis test : negative (OECD TG 482, GLP)(ECHA)
  in vitro; CHO cell Chromosome Aberration Test: negative (OECD TG 473, GLP) (ECHA)

In vivo; Mouse(Female/Male) Erythrocyte Micronucleus Test: negative (OECD TG 474, GLP) (ECHA)

○ Reproductive toxicity : Not classified

- Solvent naphtha (petroleum), light arom. : rat(male/female); 0, 5000, 10000, 20000 mg/m3; two-generation reproductive toxicity; NOAEC(reproductive toxicity) >= 20000 mg/m3 air (No adverse effects on reproductive parameters.) (OECD TG 416, GLP) (read across: low viscosity liquid hydrocarbon) (ECHA)
  rat; 30, 125 and 500 mg/kg/day; NOAEL(teratogenicity, maternal toxicity) = 500 mg/kg bw/day (OECD TG 414) (read across: low viscosity liquid hydrocarbon) (ECHA)
- Trimethyl benzene : Not available
- Xylene : 500 ppm mixed xylene (administered for 6 hours per day for 131 days prior to mating, during mating and continuing through gestation and lactation) is a NOAEC for systemic and reproductive toxicity. (ECHA)
  Overall it is concluded that xylene isomers are not developmental toxicants. (OECD TG 414) (ECHA)
- (1-Methylethyl)benzene : rat(male/female); 90days; 0, 100, 500, 1200ppm; No effects on sperm count, sperm morphology, and sperm formation; NOAEL => 1200 ppm (OECD TG 413, GLP)
  rat; 0, 100, 500, 1200ppm; 6 -15days; Above 500 ppm, food intake decreased, and at the highest concentration, maternal weight gain decreased, relative liver weight increased, and wet or scaby areas were observed. The gestational parameters are not affected. The incidence of visceral, visceral and skeletal malformations did not increase in treatment; NOAEL = 2300 ppm (OECD TG 414 , GLP)

○ Specific target organ toxicity (single exposure) : Category 3(Narcotic effects),구분 3(마취 영향)

- Solvent naphtha (petroleum), light arom. : oral; rat(male/female); No lesions were seen in any animal. LD50 > 5000 ㎎/㎏ bw, no deaths (OECD TG 401, GLP) (read across: low viscosity liquid hydrocarbon) (ECHA)
  dermal; rabbit(male/female); No visible lesions, with the exception of the dermal effects. LD50 > 2000 ㎎/㎏ bw, no deaths (OECD TG 402, GLP) (read across: low viscosity liquid hydrocarbon) (ECHA)
  inhalation: vapour; rat(male/female); Three of the five male rats exhibited lungs with small round lesions. There were no other visible gross pathological lesions observed on any of the animals at necropsy. LC50 > 5.610 mg/L air /4h, no deaths (OECD TG 403, GLP) (read across: low viscosity liquid hydrocarbon) (ECHA)
- Trimethyl benzene : Central nervous systems might be affected. (HSDB)
- Xylene : inhalation; Clinical observations including body tremors suggestive of CNS involvement were seen at all concentrations during and after exposure, on the day of exposure. (ECHA)
- (1-Methylethyl)benzene : inhalation; rat(male); No animals died. The animals showed no signs of toxicity. Gross autopsy of the survivors after 14 d revealed that viscera appeared normal. (ECHA)

○ Specific target organ toxicity (repeated exposure) : Category 2,구분 2

- Solvent naphtha (petroleum), light arom. : inhalation; rat and mouse(male/female); 322, 1402, 9869 mg/m3; Combined Chronic Toxicity / Carcinogenicity Studies; The NOAEC for unleaded gasoline vapor is 1402 mg/m3 under the test conditions of this study, based on decreased body weight gain in mice and rats at 9869 mg/m3. (OECD TG 453) (read across: low viscosity liquid hydrocarbon) (ECHA)
- Trimethyl benzene : By the repeated inhalation exposures there are lung irritation or chronic bronchitis, coagulation effects, and the effects on the central nerves system such as headaches and nervousness etc., it was classified into Category 2 all, since skin, respiratory systems, blood, and central nervous systems were considerd to be target organs. (GHS-J)
- Xylene : For mixed xylenes Where ethylbenzene is >=10%, classification under CLP as STOT-RE Cat 2 H373 is proposed [see Specific Investigations: other studies (ototoxicity)].
  The NOAEC of mixed xylenes for male rats exposed 6h/day for 5 days in each of 13 weeks was 3515 mg/m3.
  A NOAEC of 3515 mg/m3 was reported by Carpenter et al. (1975) for generalised systemic effects in male rats and male dogs. Other studies have shown that some xylene isomers adversely affect hearing in the rat, with a sub-chronic NOAEC of 1950 mg/m3 reported for p-xylene; the NOAEC for ototoxicity of m-xylene and o-xylene was greater than 7810 mg/m3 (Gagnaire et al., 2001). The ototoxicity of mixed xylenes appears to be dependent upon composition (Gagnaire et al., 2007), with a sub-chronic LOAEC of 1080 mg/m3 reported for one sample while another had a NOAEC of 2170 mg/m3. (ECHA)
- (1-Methylethyl)benzene : Based on the results of the current study, there are no signs of specific target organs related to human health (ECHA)

○ **Aspiration hazard : Not classified**

- Solvent naphtha (petroleum), light arom. : <1 mm2/s (37.8°C) (ECHA) & hydrocarbons
- Trimethyl benzene : Not available
- Xylene : 0.74 mm²/s (20°C) (ECHA) & hydrocarbons
- (1-Methylethyl)benzene : viscosity <= 20.5 mm2/s & hydrocarbons (NITE)

12. ECOLOGICAL INFORMATION

1) Ecotoxicity

- Acute toxicity : Not classfied (ATEmix>1mg/L)
- LONG-TERM HAZARDS TO THE AQUATIC ENVIRONMENT : Category 2

○ **Acute (short-term) aquatic hazard:**

Fish

- Solvent naphtha (petroleum), light arom. : 96h-LL50(Pimephales promelas) = 8.2 mg/L (EPA 66013-75-009, GLP) (ECHA)
- Trimethyl benzene : 96h-LC50 = 3.359 mg/L (estimated) (ECOSAR Class : Neutral Organics) (ECHA)
- Xylene : 96h-LC50(Oncorhynchus mykiss) = 2.6 mg/L, static (OECD TG 203) (ECHA)
- (1-Methylethyl)benzene : 96h-LC50(Cyprinodon variegatus) = 4.7 mg/L (EPA OTS 797.1400, GLP)(ECHA)

Invertebrates

- Solvent naphtha (petroleum), light arom. : 48h-EL50(Daphnia magna) = 4.5 mg/L (OECD TG 202, GLP) (ECHA)
- Trimethyl benzene : 48h-LC50(Daphnid) = 2.218 mg/L (estimated) (ECOSAR Class : Neutral Organics) (ECHA)
- Xylene : 48h-EC50(Daphnia magna)=8.5 mg/L (SIDS)
- (1-Methylethyl)benzene : 48h-EC50(Daphnia magna) = 2.14 mg/L (OECD TG 202, GLP)(ECHA)

Aquatic algae

- Solvent naphtha (petroleum), light arom. : 72h-ErL50(Pseudokirchneriella subcapitata) = 3.1 mg/L (OECD TG 201, GLP) (ECHA)
- Trimethyl benzene : 96h-EC50(Green Algae) = 3.084 mg/L (estimated) (ECOSAR Class : Neutral Organics) (ECHA)
- Xylene : 72h-ErC50(Pseudokirchneriella subcapitata)=4.7 mg/L, static (OECD TG 201) (ECHA)
- (1-Methylethyl)benzene : 72h-ErC50(Desmodesmus subspicatus) = 2.01 mg/L (OECD TG 201, GLP)(ECHA)

○ **Chronic (Long-term) aquatic hazard:**

Fish

- Solvent naphtha (petroleum), light arom. : Not available
- Trimethyl benzene : Not available
- Xylene : NOEC(Oncorhynchus mykiss)>=1.3 mg/L(mixed xylenes) (SIDS)
- (1-Methylethyl)benzene : 28d-NOEC = 0.38 mg/L (estimated)(EPISUITE)

Invertebrates

- Solvent naphtha (petroleum), light arom. : 21d-NOELR(Daphnia magna) = 2.6 mg/L (OECD TG 211, GLP) (ECHA)
- Trimethyl benzene : Not available
- Xylene : 21d-NOEC(Daphnia magna)=1.57 mg/L, static(OECD TG 211, GLP) (ECHA)
- (1-Methylethyl)benzene : 21d-NOEC(Daphnia magna) = 0.35 mg/L (OECD TG 211, GLP)(ECHA)

Aquatic algae

- Solvent naphtha (petroleum), light arom. : 72h-NOErLR(Pseudokirchneriella subcapitata) = 0.5 mg/L (OECD TG 201, GLP) (ECHA)
- Trimethyl benzene : Not available
- Xylene : Not available
- (1-Methylethyl)benzene : Not available

2) Persistence and degradability

○ **Persistence**

- Solvent naphtha (petroleum), light arom. : log Kow = 3.30 (experimental) (EPISUITE)
- Trimethyl benzene : log Kow = 3.42 (experimental) (EPISUITE)
- Xylene : log Kow=3.16 (20 °C) (ECHA)
- (1-Methylethyl)benzene : log Kow = 3.55 (ECHA)

○ **Degradability**

- Solvent naphtha (petroleum), light arom. : Not available
- Trimethyl benzene : Not available
- Xylene : The estimated half life of the xylene isomers and ethylbenzene is about 1-2 days based on a recommended reaction rate with hydroxyl radicals and the concentration of hydroxyl radicals recommended in the ECHA guidance. (ECHA)
- (1-Methylethyl)benzene : Not available

3) Bioaccumulative potential

○ **Bioaccumulation**

- Solvent naphtha (petroleum), light arom. : BCF = 69.88 (estimated) (EPISUITE)
- Trimethyl benzene : BCF = 83.85 (estimated) (EPISUITE)
- Xylene : The highest calculated BCF is 25.9. (ECHA)
- (1-Methylethyl)benzene : BCF = 94.69 (calculated)(ECHA)

○ **Biodegradation**

- Solvent naphtha (petroleum), light arom. : 90.35 % degradation after 28d; inherently biodegradable (ISO/DIS 14593) (ECHA)
- Trimethyl benzene : Not available
- Xylene : 98 % degradation (28 d) (OECD TG 301F, GLP) (ECHA)
- (1-Methylethyl)benzene : 70% degradation after 20days; readily biodegradable (ECHA)

4) Mobility in soil

- Solvent naphtha (petroleum), light arom. : Koc = 730.6 (EPISUITE)
- Trimethyl benzene : Koc = 928.6 (estimated) (EPISUITE)
- Xylene : Koc=246-540 (HSDB)
- (1-Methylethyl)benzene : Koc = 884 (20 °C, calculated)(ECHA)

5) Hazard to the ozone layer

- Solvent naphtha (petroleum), light arom. : Not applicable
- Trimethyl benzene : Not applicable
- Xylene : Not applicable
- (1-Methylethyl)benzene : Not applicable

6) Other adverse effects

- Solvent naphtha (petroleum), light arom. : Not available
- Trimethyl benzene : Not available
- Xylene : Not available
- (1-Methylethyl)benzene : Not available

13. DISPOSAL CONSIDERATIONS

1) Disposal methods

- Waste must be disposed of in accordance with federal, state and local environmental control regulation.

2) Special precaution for disposal

- Consider the required attentions in accordance with waste treatment management regulation.

14. TRANSPORT INFORMATION

1) UN No.

- 1268

2) Proper shipping name

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

3) Transport hazard class(es)

- 3

4) Packing group

- III

5) Marine pollutant

- applicable

6) Special safety response for transportation or transportation measure

- Types of Emergency Measures in Case of Fire : F-E
- Types of Emergency Measures in Leakage : S-E

15. REGULATORY INFORMATION

EINECS(or ELINCS)

- Solvent naphtha (petroleum), light arom. : European EINECS phase-in substance
- Trimethyl benzene : European EINECS phase-in substance
- Xylene : European EINECS phase-in substance
- (1-Methylethyl)benzene : European EINECS phase-in substance

EU CLP (CLASSIFICATION) - PRODUCT : Hazardous substances

- Solvent naphtha (petroleum), light arom. : Not applicable
- Trimethyl benzene : Not applicable
- Xylene : Not applicable
- (1-Methylethyl)benzene : Not applicable

Substances restricted under REACH

- Solvent naphtha (petroleum), light arom. : Substances restricted under REACH
- Trimethyl benzene : Not applicable
- Xylene : Not applicable
- (1-Methylethyl)benzene : Not applicable

Substances subject to authorization under REACH

REACH SVHC List

Korea

○ **Occupational Safety and Health Act**

- Solvent naphtha (petroleum), light arom. : Substance subject to occupational exposure limits, Harmful agents subject to work environment monitoring, Harmful agents subject to workers requiring health examination, Substance subject to submission of process safety reports
- Trimethyl benzene : Substance subject to occupational exposure limits, Substance subject to submission of process safety reports
- Xylene : Substance subject to occupational exposure limits, Hazardous substance subject to control, Harmful agents subject to work environment monitoring, Harmful agents subject to workers requiring health examination, Substance subject to submission of process safety reports
- (1-Methylethyl)benzene : Substance subject to occupational exposure limits, Substance subject to submission of process safety reports

○ **K-REACH**

- Solvent naphtha (petroleum), light arom. : Not applicable
- Trimethyl benzene : Not applicable
- Xylene : Phase-in Substances subject to Registration, Substance subject to intensive control
- (1-Methylethyl)benzene : Not applicable

○ **Chemical Control Act in Korea**

- Solvent naphtha (petroleum), light arom. : Not applicable
- Trimethyl benzene : Not applicable

- Xylene : Substance requiring preparation for accidents, List of substance subjected to the PRTR
- (1-Methylethyl)benzene : Substances chronically hazardous to humans

○ **Safety Control of Dangerous Substances Act**

- Solvent naphtha (petroleum), light arom. : Not applicable
- Trimethyl benzene : Not applicable
- Xylene : Dangerous substance
- (1-Methylethyl)benzene : Dangerous substance

U.S.A

○ **US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

- Solvent naphtha (petroleum), light arom. : Not applicable
- Trimethyl benzene : Not applicable
- Xylene : Not applicable
- (1-Methylethyl)benzene : Not applicable

○ **CERCLA Designation of hazardous substances (40 CFR 302.4)**

- Solvent naphtha (petroleum), light arom. : Not applicable
- Trimethyl benzene : Not applicable
- Xylene : US management information(CERCLA regulation)
- (1-Methylethyl)benzene : US management information(CERCLA regulation)

○ **CERCLA Section 302 regulation**

- Solvent naphtha (petroleum), light arom. : Not applicable
- Trimethyl benzene : Not applicable
- Xylene : Not applicable
- (1-Methylethyl)benzene : Not applicable

○ **CERCLA Section 304 regulation**

- Solvent naphtha (petroleum), light arom. : Not applicable
- Trimethyl benzene : Not applicable
- Xylene : Not applicable
- (1-Methylethyl)benzene : Not applicable

○ **CERCLA Section 313 regulation**

- Solvent naphtha (petroleum), light arom. : Not applicable
- Trimethyl benzene : Not applicable
- Xylene : US management information(CERCLA Section 313 regulation)
- (1-Methylethyl)benzene : US management information(CERCLA Section 313 regulation)

Interntional Convention on Environment

○ **Rotterdam Convention list**

- Solvent naphtha (petroleum), light arom. : Not applicable
- Trimethyl benzene : Not applicable
- Xylene : Not applicable
- (1-Methylethyl)benzene : Not applicable

○ **Stockholm Convention list**

- Solvent naphtha (petroleum), light arom. : Not applicable
- Trimethyl benzene : Not applicable
- Xylene : Not applicable
- (1-Methylethyl)benzene : Not applicable

○ **Montreal Protocol list**

- Solvent naphtha (petroleum), light arom. : Not applicable
- Trimethyl benzene : Not applicable
- Xylene : Not applicable
- (1-Methylethyl)benzene : Not applicable

National Inventory

○ **Korea**

- Solvent naphtha (petroleum), light arom. : Not applicable
- Trimethyl benzene : Not applicable
- Xylene : Not applicable
- (1-Methylethyl)benzene : Not applicable

○ **U.S.A**

- Solvent naphtha (petroleum), light arom. : US TSCA phase-in substance
- Trimethyl benzene : US TSCA phase-in substance
- Xylene : US TSCA phase-in substance
- (1-Methylethyl)benzene : US TSCA phase-in substance

○ **China**

- Solvent naphtha (petroleum), light arom. : China phase-in substance
- Trimethyl benzene : China phase-in substance
- Xylene : China phase-in substance
- (1-Methylethyl)benzene : China phase-in substance

○ **Japan**

- Solvent naphtha (petroleum), light arom. : Not applicable
- Trimethyl benzene : Japan ENCS phase-in substance
- Xylene : Japan ENCS phase-in substance
- (1-Methylethyl)benzene : Japan ENCS phase-in substance

16. OTHER INFORMATION

1) Reference

- Sources of information used in preparing this SDS included one or more of the following: Internal technical data, data from OECD eChemPortal, ECHA, NITE, TOXNET, IPCS and KOSHA search results.

2) Issue Date

- 2008-07-25

3) Revision number and Last date revised

○ **Number of revised**

- 13

○ **Date of last revision**

- 2026-06-09

○ **Last Revision History**

- Revision of Hazard Information and Common/Chemical Synonyms of Components

4) Other

- The information contained in the Safety Data Sheet is at the date of its issuance to the best of our knowledge correct according to the data available to us. The information is designed only as a guidance for safe handling,

use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.