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Safety data sheet

BASF Safety data sheet
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Product: **STYRENE.500**

(30054340/SDS_GEN_AU/EN)
Date of print: 10.07.2026

1. Substance/preparation and manufacturer/supplier identification

Product name:
STYRENE.500

Use: Monomer for manufacturing of polymers

Uses advised against: All consumer uses are strongly advised against.
Recommended use: Monomer., for industrial processing only
Not recommended use: Not intended for sale to or use by the general public.

Manufacturer/supplier:
BASF Australia Limited (ABN 62 008 437 867)
Level 23, 40 City Road, Southbank
Victoria 3006, AUSTRALIA
Telephone: +61 3 8855-6600

Emergency information:
BASF Emergency Advice Number: 1800 803 440 (24h) [within Australia]
BASF Emergency Advice Number: + 61 3 8855 6666 [outside Australia]

2. Hazard identification

Classification of the substance and mixture:
Aspiration hazard: Cat.1
Flammable liquids: Cat.3
Acute toxicity: Cat.4 (Inhalation - vapour)
Skin irritation: Cat.2
Eye irritation: Cat.2A
Reproductive toxicity: Cat.2 (unborn child)
Specific target organ toxicity — single exposure: Cat.3 (irritating to respiratory system)
Specific target organ toxicity — repeated exposure (Auditory organ): Cat.1
Hazardous to the aquatic environment - acute: Cat.2
Hazardous to the aquatic environment - chronic: Cat.3

Label elements and precautionary statement:

Pictogram:

Signal Word:
Danger

Hazard Statement:

H226	Flammable liquid and vapour.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H332	Harmful if inhaled.
H304	May be fatal if swallowed and enters airways.
H335	May cause respiratory irritation.
H361	Suspected of damaging the unborn child.
H372	Causes damage to organs (Auditory organ) through prolonged or repeated exposure.
H412	Harmful to aquatic life with long lasting effects.
H401	Toxic to aquatic life.

Precautionary Statements (Prevention):

P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves, protective clothing and eye protection or face protection.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260	Do not breathe dust/gas/mist/vapours.
P273	Avoid release to the environment.
P243	Take action to prevent static discharges.
P201	Obtain special instructions before use.
P241	Use explosion-proof electrical, ventilating and lighting equipment.
P202	Do not handle until all safety precautions have been read and understood.
P270	Do not eat, drink or smoke when using this product.
P264	Wash contaminated body parts thoroughly after handling.
P242	Use non-sparking tools.
P240	Ground and bond container and receiving equipment.

Precautionary Statements (Response):

P312	Call a POISON CENTER or physician if you feel unwell.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308 + P313	IF exposed or concerned: Get medical attention.
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or physician.
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 attention.
P331	Do NOT induce vomiting.
P337 + P313	If eye irritation persists: Get medical attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P370 + P378	In case of fire: Use water spray, dry powder, foam or carbon dioxide for extinction.

Precautionary Statements (Storage):

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

Precautionary Statements (Disposal):

P501	Dispose of contents and container to hazardous or special waste collection point.

Other hazards which do not result in classification:
See section 12 - Results of PBT and vPvB assessment.

3. Composition/information on ingredients

Chemical nature

Substance nature: Substance

styrene (Content (W/W): 99 % - 100 %)
CAS Number: 100-42-5

stabilized with:

4-tert-butyl catechol
CAS Number: 98-29-3

Hazardous ingredients

styrene

Content (W/W): >= 99 % - <= 100 %	Asp. Tox.: Cat. 1
CAS Number: 100-42-5	Flam. Liq.: Cat. 3
	Acute Tox.: Cat. 4 (Inhalation - vapour)
	Skin Irrit.: Cat. 2
	Eye Irrit.: Cat. 2A
	Repr.: Cat. 2 (unborn child)
	STOT SE: Cat. 3 (irr. to respiratory syst.)
	STOT RE (Auditory organ): Cat. 1
	Aquatic Acute: Cat. 2
	Aquatic Chronic: Cat. 3

4. First-Aid Measures

General advice:
First aid personnel should pay attention to their own safety. If the patient is likely to become unconscious, place and transport in stable sideways position (recovery position). Immediately remove contaminated clothing.

If inhaled:
Keep patient calm, remove to fresh air, seek medical attention.

On skin contact:
Immediately wash thoroughly with soap and water, seek medical attention.

On contact with eyes:
Wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

On ingestion:
Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

Note to physician:
Symptoms: Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11.
Hazards: Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11. (Further) symptoms and / or effects are not known so far
Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Suitable extinguishing media:
water spray, carbon dioxide, foam, dry powder

Unsuitable extinguishing media for safety reasons:
No data available.

Specific hazards:

Do not breathe gas/vapour.

Flammable liquid Cool endangered containers with water-spray. See SDS section 7 - Handling and storage.

Special protective equipment:
Wear a self-contained breathing apparatus. Special protective equipment for firefighters

Further information:
Evacuate area of all unnecessary personnel. Fight fire from maximum distance.

Further information:
Extend fire extinguishing measures to the surroundings. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

6. Accidental Release Measures

Personal precautions:
Handle in accordance with good industrial hygiene and safety practice.

Avoid all sources of ignition: heat, sparks, open flame.Use antistatic tools.

Environmental precautions:
Discharge into the environment must be avoided.

Methods for cleaning up or taking up:
For small amounts: Pick up with suitable absorbent material. Dispose of absorbed material in accordance with regulations.
For large amounts: Dike spillage. Place into suitable container for disposal.
For residues: Pick up with suitable absorbent material. Dispose of absorbed material in accordance with regulations.

Additional information: High risk of slipping due to leakage/spillage of product.

Release of substance/product can cause fire or explosion. Shut off or stop source of leak. Shut off or stop released substance/product under safe conditions.

Pack in tightly closed containers for disposal.

7. Handling and Storage

Handling

Handle in accordance with good industrial hygiene and safety practice.

Protection against fire and explosion:
Avoid all sources of ignition: heat, sparks, open flame. Ground all transfer equipment properly to prevent electrostatic discharge.

Storage

Suitable materials for containers: Carbon steel (Iron), Stainless steel 1.4401, Stainless steel 1.4301 (V2), tinned carbon steel (Tinplate), Aluminium, glass, Galvanized carbon steel (Zinc), Stainless steel 1.4361, Stainless steel 1.4541, Stainless steel 1.4439, Stainless steel 1.4571, Stainless steel 1.4539, Stainless steel 1.4306 (V2A), Stainless steel 1.4311, Stainless steel 1.4404
Unsuitable materials for containers: brass, Copper

Storage stability:
Storage temperature: < 25 °C
Check 2-3 times per week to ensure that stabilizer content is adequate.
Storage temperature: > 25 °C
Check daily to ensure that stabilizer content is adequate.

additives:
4-tert-butyl catechol (CAS Number: 98-29-3)

8. Exposure controls and personal protection

Components with occupational exposure limits

styrene, 100-42-5;
STEL value 426 mg/m3 ; 100 ppm (AU NOEL)
TWA value 213 mg/m3 ; 50 ppm (AU NOEL)
STEL value 20 ppm (ACGIHTLV)
TWA value 10 ppm (ACGIHTLV)

Personal protective equipment

Respiratory protection:
Suitable respiratory protection for higher concentrations or long-term effect: Combination filter for gases/vapours of organic compounds and solid and liquid particles (f.e. EN 14387 Type A-P2)

Hand protection:
Suitable materials also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN ISO 374-1):
fluoroelastomer (FKM) - 0.7 mm coating thickness
Manufacturer's directions for use should be observed because of great diversity of types.

Eye protection:
Safety glasses with side-shields (frame goggles) (e.g. EN 166)

Body protection:
Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust)., Low flammability, oil resistant protective clothing (e.g. in accordance with EN 465), safety shoes (f.e. according to EN 20346), antistatic

General safety and hygiene measures:
Wearing of closed work clothing is required additionally to the stated personal protection equipment. Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink

and animal feeding stuffs. Avoid contact with skin and eyes. At the end of the shift the skin should be cleaned and skin-care agents applied.

9. Physical and Chemical Properties

Form:	liquid	
Colour:	colourless, clear	
Odour:	aromatic, sweetish	
Odour threshold:	0.05 - 0.08 ppm	
pH value:	The substance does not dissociate.	
Melting point:	-30.65 °C Literature data.	
Boiling point:	145 °C (1,013 hPa) Literature data.	
Sublimation point:	not applicable	
Flash point:	31 °C Literature data.	
Flammability (solid/gas):	Flammable.	(derived from flash point)
Lower explosion limit:	1.1 %(V) For liquids not relevant for classification and labelling., The lower explosion point may be 5 - 15 °C below the flash point.	
Upper explosion limit:	6.1 %(V) For liquids not relevant for classification and labelling.	
Ignition temperature:	490 °C Literature data.	
Thermal decomposition:	No data available.	
Self ignition:	Based on its structural properties the product is not classified as self-igniting.	Test type: Spontaneous self-ignition at room-temperature.
Self heating ability:	It is not a substance capable of spontaneous heating.	
Explosion hazard:	Based on the chemical structure there is no indication of explosive properties.	
Fire promoting properties:	Based on its structural properties the product is not classified as oxidizing.	

Vapour pressure:	6.67 hPa (20 °C) Literature data.	(measured)
Density:	0.903 - 0.909 g/cm3 (20 °C) Literature data.	
Relative density:	0.903 - 0.909 (20 °C) Literature data.	
Relative vapour density (air):	> 1 (20 °C) Heavier than air.	(estimated)
Solubility in water:	Literature data. 320 mg/l (25 °C)	
Solubility (quantitative) solvent(s):	organic solvents	
Partitioning coefficient n-octanol/water (log Pow):	2.96 (25 °C) The data refers to the undissociated form of the substance.	(OECD Guideline 107)
Adsorption/water - soil:	KOC: 352; log KOC: 2.55	(calculated)
Surface tension:	Based on chemical structure, surface activity is not to be expected.	
Viscosity, dynamic:	0.696 mPa.s (25 °C) Literature data.	
Molar mass:	104.15 g/mol	

10. Stability and Reactivity

Conditions to avoid:
Avoid prolonged exposure to extreme heat. Avoid formation of polymers in valves and pipes. Avoid inhibitor loss.

Thermal decomposition: No data available.

Substances to avoid:
peroxides, oxidizing agents, vinyl polymer catalysts, caustics, copper alloys, metallic halides (salts)

Corrosion to metals: No corrosive effect on metal.

Hazardous reactions:
Radical formation can cause exothermic polymerization. Polymerizes explosively when heated or in contact with bases, acids and metal ions. Risk of spontaneous and violent self-polymerization if

inhibitor is lost or product is exposed to excessive heat. Risk of exothermic reaction. Risk of spontaneous polymerization when heated or in the presence of UV radiation. Risk of spontaneous polymerization in the presence of radical donors. Polymerization occurs with acids and acid forming substances.

Thermal decomposition products:
aromatic hydrocarbons

Reactivity:
When heated can give off ignitable vapours.

11. Toxicological Information

Routes of exposure

Acute oral toxicity

Experimental/calculated data:
LD50rat (oral): 5,000 mg/kg
Literature data.

Acute inhalation toxicity

LC50 rat (by inhalation): 12 mg/l 2770 ppm 4 h
Literature data. The vapour was tested.

Acute dermal toxicity

LD50 rat (dermal): > 2,000 mg/kg (OECD Guideline 402)

Assessment of acute toxicity

Of moderate toxicity after short-term inhalation. High concentrations in the air may cause narcosis. Virtually nontoxic after a single skin contact. Virtually nontoxic after a single ingestion. Harmful: may cause lung damage if swallowed.

Symptoms

Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11.

Irritation

Assessment of irritating effects:
Eye contact causes irritation. Skin contact causes irritation.

Experimental/calculated data:
Skin corrosion/irritation rabbit: Irritant.

Serious eye damage/irritation rabbit: Irritant.

Respiratory/Skin sensitization

Assessment of sensitization:
Skin sensitizing effects were not observed in animal studies.

Experimental/calculated data:
Guinea pig maximization test guinea pig: Non-sensitizing.

Germ cell mutagenicity

Assessment of mutagenicity:
The substance was mutagenic in various test systems with microorganisms and cell cultures; however, these results could not be confirmed in tests with mammals.

Carcinogenicity

Assessment of carcinogenicity:
A clear indication of an increased risk of cancer in humans has so far not been shown. IARC (International Agency for Research on Cancer) has classified this substance as group 2A (The agent is probably carcinogenic to humans).

Reproductive toxicity

Assessment of reproduction toxicity:
The results of animal studies gave no indication of a fertility impairing effect.

Developmental toxicity

Assessment of teratogenicity:
Possible risk of harm to the unborn child. EU-classification

Specific target organ toxicity (single exposure)

Causes temporary irritation of the respiratory tract.

Origin of data: human data

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

Assessment of repeated dose toxicity:
The substance may cause deafness after repeated inhalation.

Aspiration hazard

May also damage the lung at swallowing (aspiration hazard).

12. Ecological Information

Ecotoxicity

Assessment of aquatic toxicity:
Acutely toxic for aquatic organisms. Harmful to aquatic life with long lasting effects.

Toxicity to fish:
LC50 (96 h) 4.02 mg/l, Pimephales promelas (other, Flow through.)
Literature data.

Aquatic invertebrates:

EC50 (48 h) 4.7 mg/l, Daphnia magna (OECD Guideline 202, part 1, Flow through.)
Literature data.

Aquatic plants:
EC50 (72 h) 4.9 mg/l (growth rate), Selenastrum capricornutum (other)
Literature data.

EC10 (96 h) 0.28 mg/l (growth rate), Desmodesmus subspicatus (other)

Microorganisms/Effect on activated sludge:
EC20 (30 min) 140 mg/l, activated sludge (OECD Guideline 209, aquatic)

Chronic toxicity to fish:
Study does not need to be conducted.

Chronic toxicity to aquatic invertebrates:
No observed effect concentration (21 d), 1.01 mg/l, Daphnia magna (OECD Guideline 211, semistatic)
The statement of the toxic effect relates to the analytically determined concentration.

Assessment of terrestrial toxicity:

Soil living organisms:
LC50 (14 d) 120 mg/kg, Eisenia foetida (OECD Guideline 207, artificial soil)

Terrestrial plants:
No data available.

Other terrestrial non-mammals:
No data available.

Mobility

Assessment transport between environmental compartments:
The substance will rapidly evaporate into the atmosphere from the water surface.
Adsorption to solid soil phase is not expected.

Persistence and degradability

Elimination information:
70.9 % BOD of the ThOD (28 d) (OECD 301F; ISO 9408; 92/69/EWG, C.4-D) (aerobic, activated sludge, domestic)

Assessment of stability in water:
No data available.
Study scientifically not justified.

Information on Stability in Water (Hydrolysis):
No data available. Study scientifically not justified.

Bioaccumulation potential

Assessment bioaccumulation potential:
Significant accumulation in organisms is not to be expected.

Bioaccumulation potential:
Bioconcentration factor: 74, Fish (calculated)
Based on a weight of evidence, the compound will not bioaccumulate.

Additional information

Other ecotoxicological advice:
According to the criteria of Guidelines 67/548/EEC and 1999/45/EC the product is not to classsify as environmental hazard.

13. Disposal Considerations

Dispose of in accordance with national, state and local regulations.

Contaminated packaging:
Disposal must be made according to official regulations.

14. Transport Information

Domestic transport:

UN number or ID number:	UN 2055
UN proper shipping name:	STYRENE MONOMER, STABILIZED
Transport hazard class(es):	3
Packing group:	III
Environmental hazards:	no
Special precautions for user:	None known

Further information
Hazchem Code:3Y
IERG Number:19P

Sea transport
IMDG

UN number or ID number:	UN 2055
UN proper shipping name:	STYRENE MONOMER, STABILIZED
Transport hazard class(es):	3
Packing group:	III
Environmental hazards:	no Marine pollutant: NO
Special precautions for user:	EmS: F-E; S-D

Air transport
IATA/ICAO

UN number or ID number:	UN 2055
UN proper shipping name:	STYRENE MONOMER, STABILIZED

Transport hazard class(es):	3
Packing group:	III
Environmental hazards:	No Mark as dangerous for the environment is needed
Special precautions for user:	None known

Maritime transport in bulk according to IMO instruments

Regulation:	IBC-Code
Product name:	Styrene monomer
Pollution category:	Y
Ship Type:	3

15. Regulatory Information

Other regulations

If other regulatory information applies that is not already provided elsewhere in this safety data sheet, then it is described in this subsection.

Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP): Schedule 5

Registration status:

AICIS, AU

Listed in AIIC.

16. Other Information

Vertical lines in the left hand margin indicate an amendment from the previous version.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor a contractually designated use. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.