

**STYRENE
CAS No 100-42-5**

**MATERIAL SAFETY DATA SHEET
SDS/MSDS**

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name : Styrene

CAS-No. : 100-42-5

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

Identified uses : Laboratory chemicals, Industrial & for professional use only.

1.3 Details of the supplier of the safety data sheet

Company : Central Drug House (P) Ltd
7/28 Vardaan House
New Delhi -110002
INDIA

Telephone : +91 11 49404040

Email : care@cdhfinechemical.com

1.4 Emergency telephone number

Emergency Phone # : +91 11 49404040 (9:00am - 6:00 pm) [Office hours]

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Flammable liquids (Category 3), H226

Acute toxicity, Inhalation (Category 4), H332

Skin irritation (Category 2), H315

Eye irritation (Category 2), H319

Reproductive toxicity (Category 2), H361d

Specific target organ toxicity - repeated exposure (Category 1), H372

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal word

Danger

Hazard statement(s)

H226

Flammable liquid and vapour.

H315

Causes skin irritation.

H319

Causes serious eye irritation.

H332

Harmful if inhaled.

H361d	Suspected of damaging the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
Precautionary statement(s)	
P201	Obtain special instructions before use.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261	Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P280	Wear eye protection/ face protection.
P304 + P340 + P312	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
Supplemental Hazard Statements	none

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
Lachrymator.

SECTION 3: Composition/information on ingredients

3.1 Substances

Formula	:	C ₈ H ₈
Molecular weight	:	104.15 g/mol
CAS-No.	:	100-42-5
EC-No.	:	202-851-5
Index-No.	:	601-026-00-0

Hazardous ingredients according to Regulation (EC) No 1272/2008

Component		Classification	Concentration
Styrene			
CAS-No.	100-42-5	Flam. Liq. 3; Acute Tox. 4;	<= 100 %
EC-No.	202-851-5	Skin Irrit. 2; Eye Irrit. 2; Repr.	
Index-No.	601-026-00-0	2; STOT RE 1; H226, H332, H315, H319, H361d, H372	

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Carbon oxides

Container explosion may occur under fire conditions., Vapours may form explosive mixture with air.

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

Use water spray to cool unopened containers.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

For personal protection see section 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage temperature 2 - 8 °C

Light sensitive.

Storage class (TRGS 510): Flammable liquids

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use (US) or type ABEK (EN 14387) respirator cartridges as a backup to enginee protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance	Form: liquid, clear Colour: colourless
b) Odour	sweet
c) Odour Threshold	No data available
d) pH	No data available
e) Melting point/freezing point	Melting point/range: -31 °C - lit.
f) Initial boiling point and boiling range	145 - 146 °C - lit.
g) Flash point	32.0 °C - closed cup
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	Upper explosion limit: 8.9 %(V) Lower explosion limit: 1.1 %(V)
k) Vapour pressure	6 hPa at 20 °C
l) Vapour density	3.6
m) Relative density	0.906 g/cm ³ at 25 °C
n) Water solubility	0.05 g/l at 25 °C - slightly soluble
o) Partition coefficient: n-octanol/water	No data available
p) Auto-ignition temperature	490.0 °C 480.0 °C

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|------------------------------|-------------------|
| q) Decomposition temperature | No data available |
| r) Viscosity | No data available |
| s) Explosive properties | No data available |
| t) Oxidizing properties | No data available |

9.2 Other safety information

Relative vapour density 3.6

SECTION 10: Stability and reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage conditions.

Contains the following stabiliser(s):

(>=30 - <=50 ppm)

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

May polymerize on exposure to light.

Heat, flames and sparks.

10.5 Incompatible materials

Oxidizing agents, Copper

10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

Other decomposition products - No data available

In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - > 6,000 mg/kg(Styrene)

LC50 Inhalation - Rat - 4 h - 12,000 mg/m³(Styrene)

LD50 Dermal - Rat - male and female - > 2,000 mg/kg(Styrene)

Skin corrosion/irritation

Skin - Rabbit(Styrene)

Result: Skin irritation

(OECD Test Guideline 404)

Serious eye damage/eye irritation

Eyes - Rabbit(Styrene)

Result: Eye irritation - 24 h

Respiratory or skin sensitisation

Maximisation Test - Guinea pig(Styrene)

Does not cause skin sensitisation.

(OECD Test Guideline 406)

Germ cell mutagenicity

Laboratory experiments have shown mutagenic effects.(Styrene)

Carcinogenicity

This product is or contains a component that has been reported to be possi classification.(Styrene)

IARC: 2B - Group 2B: Possibly carcinogenic to humans (Styrene)

Reproductive toxicity

Suspected of damaging the unborn child. Suspected human reproductive toxicant(Styrene)

Specific target organ toxicity - single exposure

No data available(Styrene)

Specific target organ toxicity - repeated exposure

Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard

No data available(Styrene)

Additional Information

RTECS: WL3675000

Dermatitis, Central nervous system depression, Nausea, Dizziness, Headache, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.(Styrene)

Endocrine system. - (Styrene)

SECTION 12: Ecological information**12.1 Toxicity**

Toxicity to fish	NOEC - Pimephales promelas (fathead minnow) - 4 mg/l - 96 h(Styrene) LC50 - Pimephales promelas (fathead minnow) - 32 mg/l - 96 h(Styrene) LOEC - Pimephales promelas (fathead minnow) - 7.6 mg/l - 96 h(Styrene)
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Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) - 4.7 mg/l - 48 h(Styrene) (OECD Test Guideline 202)
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Toxicity to algae	IC50 - Pseudokirchneriella subcapitata (green algae) - 1.4 mg/l - 72 h(Styrene)
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12.2 Persistence and degradability

Biodegradability	aerobic - Exposure time 28 d(Styrene) Result: > 60 % - Readily biodegradable
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12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available(Styrene)

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

Toxic to aquatic life.

No data available

SECTION 13: Disposal considerations**13.1 Waste treatment methods****Product**

Burn in a chemical incinerator equipped with an afterburner and scrubber b highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

