



Section 1. Identification

Product identifier

Product Identity Styrene Monomer 50ppm
Other means of identification Cinnamene, Cinnamenol; Diarex HF 77; Ethenylbenzene; NCI-C0220; Pheneth

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

Industrial Use Only

Details of the supplier of the safety data sheet

Company Name Silver Fern Chemical, Inc.
2226 Queen Anne Avenue North
Seattle, WA 98109 USA
Customer Service: 1-866-282-3384 /
info@silverfernchemical.com
Website - www.silverfernchemical.com

Emergency 24-hour Emergency Telephone No. Emergency telephone number
Infotrac: 1-800-535-5053; Outside USA & Canada +1-352-323-3500

Customer Service:

Section 2. Hazard(s) identification

Classification of the substance or mixture under OSHA's Hazard Communication Standard (1910.1200) revised 2024 (GHS revision 7)

Flammable Liquid, category 3; H226 Flammable liquid and vapor.

Acute toxicity(inhalation), category 4; Harmful if inhaled.

H332

Skin corrosion/irritation category 2; Causes skin irritation.

H315

Serious eye damage / eye irritation, Causes serious eye irritation.
category 2; H319



Reproductive toxicity, category 2; Suspected of damaging the unborn child.
H361D
Specific target organ toxicity, Specific May cause respiratory irritation.
exposure category 3; H335
Specific target organ toxicity, Causes damage to organs through prolonged or
repeated exposure category 1; H372 repeated exposure. Specific Target Organs:
(hearing organs)
Aspiration hazard, category 1; H304 May be fatal if swallowed and enters airways.
Aquatic toxicity (acute), category 2; Toxic to aquatic life.
H401
Aquatic toxicity (chronic), category 3; Harmful to aquatic life with long lasting effects.
H412

Label elements



Danger

H226 Flammable liquid and vapor.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H361d Suspected of damaging the unborn child.



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H372 Causes damage to organs through prolonged or repeated exposure.

H401 Toxic to aquatic life.

H412 Harmful to aquatic life with long lasting effects.

[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, sparks, open flames, and other ignition sources - No smoking.

P233 Keep container tightly closed.

P235 Keep cool.

P240 Ground, bond container and receiving equipment.

P241 Use explosion-proof electrical, ventilating, light, equipment.

P242 Use only non-sparking tools.

P243 Take action to prevent static discharges.

P260 Do not breathe dust, fume, mist, vapors or spray.

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

P273 Avoid release to the environment.

P280 Wear protective gloves, eye protection, and face protection.

[Response]

P301+310 IF SWALLOWED: Immediately call a POISON CENTER, doctor or physician.

P302+352 IF ON SKIN: Wash with plenty of soap and water.

P303+361+353 IF ON SKIN (or hair): Remove, take off immediately all contaminated clothing. Rinse skin with water, shower.

P304+340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308+313 IF exposed or concerned: Get medical advice or attention.

P312 Call a POISON CENTER, doctor or physician if you feel unwell.

P314 Get Medical advice or attention if you feel unwell.

P331 Do NOT induce vomiting.

P332+313 If skin irritation occurs: Get medical attention.

P337+313 If eye irritation persists: Get medical advice or attention.

P362+364 Take off contaminated clothing and wash it before reuse.

P370+378 In case of fire: Use extinguishing media listed in section 5 of SDS for extinction.

[Storage]

P403+233 Store in a well-ventilated place. Keep container tightly closed.

P403+235 Store in a well-ventilated place. Keep cool.



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P405 Store locked up.

[Disposal]

P501 Dispose of contents or container in accordance with local and national regulations.

Other hazards

This product contains no PBT/vPvB chemicals.

This product contains no endocrine disrupting chemicals.

Section 3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the OSHA's Hazard Communication Standard (1910.1200) revised 2024 (GHS revision 7).

Ingredient/Chemical Designations	Weight %	GHS Classification	Notes	OSHA PEL	ACGIH TLV
Styrene CAS Number: 100-42-5 Synonyms: Benzene, ethenyl-	100%	Flammable Liquid, category 3;H226 Acute toxicity(inhalation), category 4;H332 Skin corrosion/irritation category 2;H315 Serious eye damage / eye irritation, category 2;H319 Reproductive toxicity, category 2;H361D Specific target organ toxicity, repeated exposure category 1;H372 Specific target organ toxicity, Specific exposure category 3;H335 Aspiration hazard, category 1;H304 Aquatic toxicity (chronic), category 3;H412	No data available	100 ppm	20 ppm

The actual concentration or concentration range is withheld as a trade secret.

*PBT/vPvB - PBT-substance or vPvB-substance.

The full texts of the phrases are shown in Section 16.

Section 4. First aid measures

Description of first aid measures



- General** In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.
- Inhalation** Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give artificial respiration. If unconscious, place in the recovery position and obtain immediate medical attention. Give nothing by mouth.
- Eyes** Rinse with plenty of clean water for at least 15 minutes, holding the eyelids apart and seek medical attention.
- Skin** Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser.
- Ingestion** If accidentally swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.

Most important symptoms and effects, both acute and delayed

Overview Treat symptomatically. Exposure to solvent vapor concentrations from the component solvents in excess of the stated occupational exposure limits may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms include headache, nausea, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness.

Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in dryness, irritation and possible non-allergic contact dermatitis. Solvents may also be absorbed through the skin. Splashes of liquid in the eyes may cause irritation and soreness with possible reversible damage. See section 2 for further details.

- Inhalation** Harmful if inhaled. May cause respiratory irritation. May be fatal if swallowed and enters airways.
- Eyes** Causes serious eye irritation.
- Skin** Causes skin irritation.

Section 5. Fire-fighting measures

Extinguishing media

Recommended extinguishing media; alcohol resistant foam, CO₂, powder, water spray.
Unsuitable extinguishing media: Do not use; water jet.

Special hazards arising from the substance or mixture



Hazardous decomposition: High temperatures and fires may produce such toxic substances as carbon monoxide and carbon dioxide.

Keep away from heat, sparks, open flames, and other ignition sources - No smoking. Keep container tightly closed.

Keep cool.

Ground, bond container and receiving equipment.

Use explosion-proof electrical, ventilating, light, equipment.

Use only non-sparking tools.

Take action to prevent static discharges.

Do not breathe dust, fume, mist, vapors or spray.

Advice for fire-fighters

As with all fires, wear positive pressure, self-contained breathing apparatus, (SCBA) with a full-face piece and protective clothing. Persons without respiratory protection should leave area. Wear SCBA during clean-up immediately after fire. No smoking.

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Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Put on appropriate personal protective equipment (see section 8).

Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

Environmental precautions

Do not allow spills to enter drains or waterways. Notify proper authorities. Reportable Quantity is 1,000 pounds or 13.8 gallons.

Methods and material for containment and cleaning up

Ventilate the area and avoid breathing vapors. Take the personal protective measures listed in section 8.

Contain and absorb spillage with non-combustible materials e.g. sand, earth, and vermiculite. Place in closed containers outside buildings and dispose of according to the Waste Regulations.



Section 7. Handling and storage

Precautions for safe handling

Handle containers carefully to prevent damage and spillage.
See section 2 for further details. - [Prevention]

Conditions for safe storage, including any incompatibilities

Incompatible materials: Strong oxidizing agents and acids.
See section 2 for further details. - [Storage]

Specific end use(s)

No available information

Section 8. Exposure controls / personal protection

Control parameters

Exposure

CAS No.	Ingredient	Source	Value
100-42-5	Styrene	OSHA	TWA 100 ppm C 200 ppm 600 ppm (5-minute maximum peak in any 3 hours)
		ACGIH	10 ppm 20 ppm
		NIOSH	TWA 50 ppm (215 mg/m ³) STEL: 100 ppm (425 mg/m ³)

Exposure controls

Respiratory If workers are exposed to concentrations above the exposure limit, they must use the appropriate, certified respirators.

Eyes Wear safety glasses with side shields to protect the eyes. An eye wash station is suggested as a good workplace practice.

Skin Avoid skin contact. Wear PVC or rubber gloves to keep skin contact to a minimum. Refer to the manufacturer's recommendations regarding the suitability of any gloves used.

Engineering Controls Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits suitable respiratory protection must be worn.



Other Work Practices Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

See section 2 for further details.

Section 9. Physical and chemical properties

Information on basic physical and chemical properties

Physical State	Liquid.
Color	Clear, Colorless to Yellow.
Odor	Aromatic.
Melting point / freezing point	-23.8°F (-30.6°C)
Initial boiling point and boiling range	145°C (293°F)
Flammability (solid, gas)	No available information.
Upper/lower flammability or explosive limits	Lower Explosive Limit: 1.1% Upper Explosive Limit: 6.1%
Flash Point	31°C (87.8°F)
Auto-ignition temperature	Not spontaneously flammable.
Decomposition temperature	No available information.
pH	No available information.
Viscosity (cSt)	0.762 Centipoise (cPa, cP) or mPas @ 20°C (68°F)
Solubility in Water	0.32 g/l @ 20°C
Partition coefficient n-octanol/water (Log Kow)	No available information.
Vapor pressure (Pa)	5 mmHg (torr) @ 20°C (68°F)
Relative Density	0.905
Vapor Density	3.6 (Air = 1)
Evaporation rate (Ether = 1)	0.49n-Butyl Acetate = 1
VOC Content	100% (7.25/gal)
Oxidising properties	No available information.
Explosive properties	No available information.

Other information

No other relevant information.



Section 10. Stability and reactivity

Reactivity

Hazardous Polymerization will not occur.

Chemical stability

Stable under normal circumstances.

Possibility of hazardous reactions

No available information

Conditions to avoid

Depleted inhibitor levels. Heat, sparks, open flames and strong oxidizing conditions. Vapor may be ignited by static sparks, open flame, and other ignition sources. Exposure to sunlight, ultraviolet light or x-rays may result in spontaneous polymerization.

Incompatible materials

Strong oxidizing agents and acids.

Hazardous decomposition products

High temperatures and fires may produce such toxic substances as carbon monoxide and carbon dioxide.

Section 11. Toxicological information

Acute toxicity

Exposure to solvent vapor concentrations from the component solvents in excess of the stated occupational exposure limits may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms include headache, nausea, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness.

Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in dryness, irritation and possible non-allergic contact dermatitis. Solvents may also be absorbed through the skin. Splashes of liquid in the eyes may cause irritation and soreness with possible reversible damage.

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).



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Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LC50, mg/L/4hr	Inhalation Dust/Mist LC50, mg/L/4hr	Inhalation Gas LC50, ppm
Styrene - (100-42-5)	Oral - rat - 2,650 mg/kg	No data available.	Inhalation - rat - 4 h - 12,000 mg/m3	No data available.	No data available.

Carcinogen Data

CAS No.	Ingredient	Source	Value
100-42-5	Styrene	OSHA	Regulated Carcinogen: No;
		NTP	Known: No; Suspected: Yes;
		IARC	Group 1: No; Group 2a: Yes; Group 2b: No; Group 3: No;
		ACGIH	A4

Classification	Category	Hazard Description
Acute toxicity (oral)	---	Not Applicable
Acute toxicity (dermal)	---	Not Applicable
Acute toxicity (inhalation)	4	Harmful if inhaled.
Skin corrosion/irritation	2	Causes skin irritation.
Serious eye damage/irritation	2	Causes serious eye irritation.
Respiratory sensitization	---	Not Applicable
Skin sensitization	---	Not Applicable
Germ cell mutagenicity	---	Not Applicable
Carcinogenicity	---	Not Applicable
Reproductive toxicity	2	Suspected of damaging the unborn child.
STOT-single exposure	3	May cause respiratory irritation.
STOT-single exposure	---	Not Applicable
STOT-repeated exposure	1	Causes damage to organs through prolonged or repeated exposure.
Aspiration hazard	1	May be fatal if swallowed and enters airways.

Possible routes of entry:

Symptoms and effects, both acute and delayed:

Treat symptomatically.

Inhalation Harmful if inhaled. May cause respiratory irritation. May be fatal if swallowed and enters airways.



Eyes Causes serious eye irritation.
Skin Causes skin irritation.

Section 12. Ecological information

Toxicity

Harmful to aquatic life with long lasting effects.

Aquatic Ecotoxicity

Ingredient	96 hr LC50 fish, mg/L	48 hr EC50 crustacea, mg/L	ErC50 algae, mg/L
Styrene - (100-42-5)	4.08, Pimephales promelas	4.70, Daphnia magna	No data available.

Persistence and degradability

There is no data available on the preparation itself.

Bioaccumulative potential

No available information

Mobility in soil

No available information

Results of PBT and vPvB assessment

This product contains no PBT/vPvB chemicals.

Other adverse effects

No available information

Section 13. Disposal considerations

Waste treatment methods

Observe all federal, provincial and local regulations when disposing of this substance.

Section 14. Transport information



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	DOT (Domestic Surface Transportation)	IMO / IMDG (Ocean Transportation)	ICAO/IATA
UN number	UN2055	UN2055	UN2055
UN proper shipping name	UN2055, Styrene monomer, stabilized,3,III	Styrene Monomer, Stabilized	Styrene Monomer, Stabilized
Transport hazard class(es)	DOT Hazard Class:3 Sub Class: Not Applicable	IMDG:3 Sub Class: Not Applicable	Air Class:3 Sub Class: Not Applicable
Packing group	III	III	III

Environmental hazards

Marine Pollutant: No;

Special precautions for user

No available information

Section 15. Regulatory information

Regulatory Overview The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.

Classification of the substance or mixture under OSHA's Hazard Communication Standard (1910.1200) revised 2024 (GHS revision 7)

Toxic Substance Control Act (TSCA)

CAS Number	Ingredient	Toxic Substance Control Act (TSCA)	Comments	Status
0000100-42-5	Styrene	Yes		ACTIVE

The following flags are used:

- Active - indicates commercial status designation of active
- E - indicates a substance that is the subject of a Section 5(e) Consent Order under TSCA.
- F - indicates a substance that is the subject of a Section 5(f) Rule under TSCA.
- N - indicates a polymeric substance containing no free-radical initiator in its Inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
- P - indicates a commenced Premanufacture Notice (PMN) substance.
- R - indicates a substance that is the subject of a Section 6 risk management rule



under TSCA.

- S - indicates a substance that is identified in a final Significant New Uses Rule.
- SP - indicates a substance that is identified in a proposed Significant New Uses Rule.
- T - indicates a substance that is the subject of a final Section 4 test rule under TSCA.
- UVCB Chemical Substances of Unknown or Variable Composition, Complex Reaction Products and Biological Materials
- XU - indicates a substance exempt from reporting under the Chemical Data Reporting Rule, (40 CFR 711).
- Y1 - indicates a polymer that has a number-average molecular weight greater than 1,000 and that was exempt under the 1984 polymer exemption rule.
- Y2 - indicates a polymer that is a polyester and that was exempt under the 1984 polymer exemption rule.

Proposition 65 - Carcinogens (>0.0%):

Styrene

Proposition 65 - Developmental Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Female Repro Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Male Repro Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 Label Warning:



WARNING: This product can expose you to chemicals including [Styrene], which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Mass RTK Substances (>1%):

Styrene

New Jersey RTK Substances (>1%):

Styrene



Pennsylvania RTK Substances (>1%):

Styrene

OSHA Process Safety Management Standard Highly Hazardous Chemicals, Toxics and Reactives:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

US EPA List of Regulated Substances under the Risk Management Plan (RMP) Program:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

US EPA Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) under the Minimum Risk Exemption:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

U.S. - DEA List II or Essential Chemicals:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

U.S. - DEA - Exempt Chemical Mixtures - List 1 and 2:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

US DHS Chemical Facility Anti-Terrorism Standards (CFATS):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

<p>Section 16. Other information</p>

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DISCLAIMER OF RESPONSIBILITY

The information on this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. Some information presented and conclusions drawn herein are from sources other than direct test data on the substance itself. The conditions or



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methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume damage or expense arising out of or in any way responsibility and expressly disclaim liability for loss, connected with handling, storage, use, or disposal of this product. If the product is used as a component in another product, this SDS information may not be applicable.

The full text of the phrases appearing in section 3 is:

H226 Flammable liquid and vapor.

H304 May be fatal if swallowed and enters airways.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

H361 Suspected of damaging fertility or the unborn child.

H372 Causes damage to organs through prolonged or repeated exposure.

H412 Harmful to aquatic life with long lasting effects.

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