



STYRENE MONOMER

Reactive Monomer / Reactive Diluent for Unsaturated Polyester Systems

PRODUCT DESCRIPTION

Styrene Monomer is the reactive diluent and crosslinking monomer of the unsaturated polyester system. It lowers resin viscosity for application and then copolymerises into the cured network rather than evaporating from it, so it is consumed by the cure rather than lost. It is supplied inhibited, because uninhibited styrene polymerises on storage and does so exothermically.

KEY FEATURES

- Reactive monomer and reactive diluent
- Reduces the viscosity of unsaturated polyester resins for application
- Copolymerises into the cured network rather than evaporating from it
- Supplied as a separate reactive component, not a standalone resin
- Supplied inhibited — storage condition and stock rotation matter

RECOMMENDED APPLICATIONS

- Viscosity adjustment of unsaturated polyester resins
- Crosslinking monomer in polyester and vinyl ester systems
- Gelcoat and laminating resin formulation
- General FRP resin preparation

PRODUCT SPECIFICATION

Product Type	Styrene Monomer
Function	Reactive monomer / reactive diluent
Appearance	Clear, colourless liquid
Used In	Compatible unsaturated polyester resin systems

These four rows are as published on the Samrat Poly Resins product page. Samrat has not published a purity, inhibitor content, density or any other measured figure for the styrene it supplies. Purity and inhibitor content are consignment properties: obtain them from the certificate of analysis that accompanies each delivery.

Not published by Samrat Poly Resins for this product and therefore not stated: Purity and inhibitor content of the supplied consignment — obtain from its certificate of analysis; Maximum storage temperature and inhibitor monitoring interval for the supplied grade; Packaging and minimum order quantity.

REFERENCE INFORMATION — PROPERTIES OF STYRENE

Reference information — not a specification of the product Samrat supplies

Chemical name / CAS number	Styrene (vinyl benzene) / 100-42-5
Molecular weight	104.15 g/mol
Density	0.909–0.911 at 15 °C (ASTM D4052)
Boiling point	145–146 °C
Freezing point	–30 to –31 °C
Viscosity	0.76 cP at 20 °C
Refractive index	1.5445 at 20 °C
Flash point	31 °C, closed cup
Solubility	Sparingly soluble in water; soluble in alcohols and ethers
Volume shrinkage on polymerisation	Approx. 17%
Heat of polymerisation	Approx. 17.8 kcal/mol
Typical polymer-grade purity	99.7% min (ASTM D5135) — a commercial grade limit, not a batch result
Typical inhibitor content	10–20 ppm as TBC (ASTM D4590) — a commercial grade range, not a batch result

These are properties of the chemical styrene, drawn from published producer technical data (SABIC Styrene Monomer Global Technical Data Sheet, rev. 20170706) and standard chemical reference data. They are not measurements of the consignment Samrat supplies. The shrinkage and heat-of-polymerisation figures describe how styrene behaves when it polymerises — they are not batch specifications. The purity and inhibitor figures are commercial grade limits: check each delivery against its own certificate of analysis.

SAFETY & HANDLING

Handle with appropriate personal protective equipment and adequate ventilation. **Styrene is a flammable liquid and polymerises exothermically if the inhibitor is depleted or if it is stored warm.** Keep cool, keep away from heat, sparks, open flame and peroxides, and do not hold stock beyond the supplier's stated period without checking inhibitor level. Refer to the applicable Safety Data Sheet (SDS) before handling.

Disclaimer: The information above is based on data published by the manufacturer at the time of issue and is believed accurate. Values shown are typical and are not to be interpreted as guaranteed specifications; properties may vary within normal manufacturing tolerances between batches. Users are responsible for determining suitability for their intended application and should confirm current specifications directly with Samrat Poly Resins prior to use.