

# Styrene Monomer 80 4-T

CAS NO. 100-42-5

| Product Description                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Key Features                                                                                                                                                                                   | Application                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>Styrene monomer is a clear colorless to dark liquid with an aromatic odor. Its vapor is heavier than air and irritating to the eyes and mucous membranes. It dissolves in some liquids but doesn't dissolve easily in water.</li> <li>Styrene monomer is an industrial chemical and important raw material for making a range of modern plastics and synthetic rubbers which are used in a host of everyday products.</li> </ul> | <ul style="list-style-type: none"> <li>Strength</li> <li>Durability</li> <li>Comfort</li> <li>Light weight</li> <li>Safety</li> <li>Energy efficiency</li> <li>Protective qualities</li> </ul> | <ul style="list-style-type: none"> <li>Bicycle and motorcycle helmets</li> <li>Building insulation</li> <li>Carpet backing</li> <li>Child car seats</li> <li>Computers</li> <li>Food and drink containers</li> <li>Household appliances</li> <li>Kitchen countertops</li> <li>Manufacturing surfactants</li> <li>Medical devices</li> <li>Packaging</li> <li>Polymers</li> <li>Raw material in industry</li> <li>Refrigerator door liners</li> <li>Reinforced fiberglass composites</li> <li>Rubber tyres</li> <li>Stabilizers</li> <li>Surfboards</li> </ul> |

| Properties                                | Typical Value                 | Unit                | Test Based On |
|-------------------------------------------|-------------------------------|---------------------|---------------|
| Assay                                     | 99.80 Min                     | wt%                 | ASTM D5135    |
| Autoignition Temperature                  | 490                           | °C                  | -             |
| Boiling Point @ 760 mmHg                  | 145                           | °C                  | -             |
| Color Pt-Co (APHA)                        | 10 Max                        | -                   | ASTM D1209    |
| Critical Pressure                         | 39.46                         | ATM                 | -             |
| Critical Temperature                      | 373                           | °C                  | -             |
| Critical Volume                           | 0.0541                        | ft <sup>3</sup> /lb | -             |
| Critical Compress                         | 0.256                         | -                   | -             |
| Density @ 20 °C                           | 906                           | Kg/m <sup>3</sup>   | -             |
| Electrical Conductivity @ 25 °C           | 10                            | pS/m                | -             |
| Empirical Formula                         | C <sub>8</sub> H <sub>8</sub> | -                   | -             |
| Evaporation Rate<br>(n-butyl acetate = 1) | 12.4                          | -                   | ASTM D 3539   |
| Expansion Coefficient @ 20 °C             | 0.000971                      | Per °C              | -             |
| Explosive value                           |                               |                     |               |
| Minimum                                   | 0.9                           | vol%                | -             |
| Maximum                                   | 6.8                           | vol%                | -             |
| Fire Point                                | N/D                           | N/D                 | -             |
| Flash Point                               |                               |                     |               |
| in close containe                         | 31                            | °C                  | -             |
| Freezing Point                            | -30.6                         | °C                  | -             |
| Heat Capacity (Saturated Liquid) @ 25 °C  | 0.408                         | Cal/g°C             | -             |
| Heat of Combustion (Liquid) @ 25 °C       | -1019                         | Kcal/mol            | -             |
| Heat of Polymerization @ 25 °C            | 16.68                         | Kcal/mol            | -             |
| Heat of Vaporization @ 25 °C              | 100.5                         | Cal/g               | -             |

| Properties                              | Typical Value         | Unit              | Test Based On |
|-----------------------------------------|-----------------------|-------------------|---------------|
| Latent Heat of Vaporization             | 86.8                  | cal/g             | -             |
| Liquid Surface Tension @ 19 °C          | 0.03214               | N/m               | -             |
| Liquid Viscosity @ 20 °C                | 0.906                 | g/cm <sup>3</sup> | -             |
| Maximum Incremental Reactivity (MIR)    | N/D                   | -                 | -             |
| Melting point                           | -30.6                 | °C                | -             |
| Molecular Weight                        | 104.15                | g/mol             | -             |
| Nitrocellulose Solubility               | N/D                   | -                 | -             |
| Partition coefficient                   |                       |                   |               |
| n-octanol/water (log KOW) @ 25 °C       | 2.96                  | -                 | -             |
| Soil organic carbon/water (log KOC)     | 2.547                 | -                 | -             |
| Ratio of Specific Heats of Vapor (Gas)  | 1.074                 | -                 | -             |
| Refractive Index @ 20°C                 | 1.546                 | -                 | -             |
| Solubility coefficient (in EtOH/Water)  | Low pow 2.95 measured | -                 | -             |
| Solubility in water @ 20 °C             | 0.32                  | g/l               | -             |
| Specific Gravity @ 20°C/20°C (Liquid)   | 0.906                 | -                 | -             |
| Thermal Conductivity (Saturated Liquid) |                       |                   |               |
| Saturated Liquid @ 25 °C                | 1.175                 | Cal/(hr.cm.°C)    | -             |
| Vapor @ 1 ATM, 175 °C                   | 0.180                 | Cal/(hr.cm.°C)    | -             |
| Vapor Density                           |                       |                   |               |
| Air = 1                                 | 3.6                   | -                 | -             |
| Water = 1 @ 20 °C                       | 0.906                 | -                 | ASTM D891     |
| Vapor Pressure @ 20 °C                  | 6.62 (78)             | hPa (mmHg)        | -             |
| Viscosity                               | 0.73                  | mPa.s             | ASTM D445     |

#### Notes

Typical properties: these are not to be construed as specifications.

<sup>1</sup>Product may not be available in one or more countries in the identified Availability regions. Please contact your Sales Representative for complete Country Availability.

For additional technical, sales and order assistance please contact our sales representative

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