



FIBRANT

EcoLactam[®] liquid



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|--------------------------------------|--|-----------|--------------------------|
| Formula | C ₆ H ₁₁ NO (ε-Caprolactam) Molecular weight: 113.16 CAS No.: 105-60-2 | | |
| Introduction | <p>EcoLactam[®] is a monomer used in the manufacturing of Polyamide-6. EcoLactam[®] has an extremely low carbon footprint. More information can be obtained through your account manager or at www.fibrant52.com</p> <p>EcoLactam[®] typical use cases:</p> <ul style="list-style-type: none"> • Clothing, ropes, fishing nets; • Packaging films; • Engineering Plastics: Plates, rods, molded parts <p>Besides the above, Polyamide 6 is used in many other application fields.</p> | | |
| Appearance | Colorless liquid at temperatures above the melting point. | | |
| Storage | Store in isolated, moisture-tight tanks in a cool, dry area. Store molten material at 80-90 °C under a dry nitrogen blanket containing less than 5 ppm oxygen to prevent formation of volatile bases. Caprolactam must be kept away from flammables, oxidizing agents, strong acids and bases and protected from moisture and sunlight. | | |
| Transport | Road tank truck | | |
| | Rail tank cars | | |
| | Tank containers | | |
| Safety & Application Info | Always refer to the Material Safety Data Sheet (MSDS) for detailed information on safety, handling and disposal. | | |
| Physical properties | Density | at 80 °C | 1013.5 kg/m ³ |
| | | at 100 °C | 998.3 kg/m ³ |
| | Viscosity | at 80 °C | 8.52 mPa.s (cP) |
| | | at 100 °C | 4.87 mPa.s (cP) |
| | Solidification/Melting Point | 69 °C | |



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| | Boiling point at 1013 mbar | 270 °C | |
|-------------------------------|---|-------------------|--|
| | Vapor pressure at 70 °C | ±0.5 mbar | |
| | Flash point (closed cup) | 139 °C | |
| | Auto-ignition temperature | 395 °C | |
| Specification | Parameter | Value | Analysis Method |
| | Water | max 0.050 % m/m | Intertek 1797. Karl-Fischer titration based on ISO 760 |
| | Volatile bases | max 0.50 mmol/kg | Intertek 686. Distillation method based on ISO 8661 |
| | Absorbance at 290 nm | max 0.050 | Intertek 621. Spectrophotometric method based on ISO 7059 |
| | Permanganate Absorption Number (PAN) | max 4.0 | Intertek 1892. Spectrophotometric method based on ISO 8660 |
| | Color | max 5 APHA | Intertek 1373. Spectrophotometric based on ISO 8112 |
| | Alkalinity | max 0.050 mmol/kg | Intertek 1890. Potentiometric titration |
| | Acidity | max 0.050 mmol/kg | Intertek 1890. Potentiometric titration |
| | Ash ¹ | max 10 mg/kg | Intertek 1971. Gravimetric method |
| | Insolubles in water ¹ | max 5 mg/kg | Intertek 1972. Gravimetric method |
| | Iron ¹ | max 0.5 mg/kg | Intertek 1397. Spectrophotometric method |
| ¹ Skip lot testing | | | |
| Sales | Fibrant B.V. | | |
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