

Description

Lapox K-24 is a low colour aromatic amine based on 4,4'-diamino diphenyl methane (DDM) and 3,3'- diethyl 4,4'-diamino diphenyl methane. It is suitable to cure epoxy resin at elevated temperature. It is viscous liquid at room temperature; hence ease of handling while mixing with resin. It provides excellent combination of mechanical, electrical and thermal properties. Appropriately cured with epoxy resin is able to provide glass transition temperature up to 145°C.

Advantages

Appropriate gel time with basic liquid resin
Excellent electrical properties
High glass transition temperature
Moderate pot life above ambient temperature

Applications

Components for high chemical resistance
Electrical components
General engineering components
Structural composites components

Processing

Castings
Filament winding and pultrusion
Potting and encapsulation
Prepreg and lamination

Typical specifications

| Properties | Unit | Test method | Values |
|--------------------------------------|---------|-------------|----------------------|
| Appearance | - | Visual | Clear, yellow liquid |
| Colour | GS | ASTM D1544 | Max 8 |
| Amine value | eq/kg | ASTM D2073 | 8 - 9 |
| Viscosity at 25°C | m Pas | ASTM D2196 | 1,500 - 2,000 |
| Gel time at 80°C ¹ , 12 g | Minutes | DIN 16945 | 80 - 120 |
| AHEW | g/eq | - | 65 |
| Recommended ratio | w/w | - | 34 |
| Glass transition | °C | DSC | Min 145 |

¹Gel time of 12 g mix mass in gel timer. Mixing ratio of Lapox L-12: Lapox K-24 is 100:34 w/w.

²Curing schedule: 140°C/4 hours

Mechanical properties of cured specimen³

| Properties | Unit | Test method | Values |
|-----------------------------|-------------------|-------------|--------|
| Tensile strength | MPa | ISO 527-2 | 70 |
| Tensile modulus | MPa | ISO 527-2 | 2,800 |
| Flexural strength | MPa | ISO 178 | 120 |
| Flexural modulus | MPa | ISO 178 | 2,800 |
| Impact strength (charpy) | KJ/m ² | ISO 179 | 32 |
| Heat deflection temperature | °C | ISO 75-2 | 135 |

³Post cure at 140°C/4 hours

| | |
|-----------------------------|---|
| Packaging | Lapox K-24 is available in 200 kg MS HDPE drums and 1,000 kg IBC. Other packing may be considered on request. |
| Storage and handling | Lapox K-24 should be stored in a cool and dry place, preferably in a sealed container and should not be exposed to direct sunlight. This product has a shelf-life of 1 year, if stored in its original container between 18°C and 25°C away from humidity and excessive heat. Please refer to the Safety Data Sheet (SDS) for detailed instructions on storage and handling. |
| Safety | Wear personal protective equipment (PPE). Avoid contact with the eyes and skin. In case of direct contact and irritation, the resin should be washed off immediately with soap and warm water. Avoid breathing vapours, mist or gas. Please refer to the SDS for detailed safety instructions. |
| Spills and disposal | In case of spills, sweep up and shovel the spilled material. Keep spilled material in suitable, closed containers for disposal. Soak up with an absorbent such as clay, sand or other suitable material. Flush area with water to remove trace residue. Do not allow the product to reach the sewage system. Waste must be disposed of in accordance with federal, state or local regulations, as applicable. |
| Contact | E-mail: polymers@atul.co.in Website: www.atul.co.in |
| Note | Lapox [®] is a registered trademark of Atul Ltd. |

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