

DESCRIPTION

Imicure EMI-24 curing agent is 2-ethyl-4-methyl Imidazole a high reactivity low melting imidazole designed for use as a latent curing agent/curing accelerator for epoxy resins. The low volatility and high reactivity as an accelerator for dicyandiamide coupled with high mechanical and electrical properties when cured make Imicure EMI-24 suitable for the manufacture of printed circuit board laminates, structural adhesives and solder resist inks. Imicure EMI-24 is also a highly efficient accelerator for anhydride cured epoxies for electronic encapsulation and filament winding applications. It is also an efficient curing agent in its own right for the manufacture of varnishes and conductive paints.

ADVANTAGES

Imicure EMI-24 curing agent provides the following advantages over other imidazole and amine curing agents and accelerators:

- **Printed Circuit Board Laminates**
Shorter B-stage cure times, reduced solvent requirements, excellent glass transition (T_g) temperatures
- **Filament Winding Application**
Long pot life, excellent physical properties, high heat distortion temperatures
- **Casting Applications**
Long pot life, ease of handling, high heat distortion temperatures
- **Adhesives**
Outstanding adhesion to wood, metal and glass
- **Coatings**
Excellent shelf stability

SHELF LIFE

At least 36 months from the date of manufacture in the original sealed container at ambient temperature.

STORAGE AND HANDLING

Refer to the Safety Data Sheet for Imicure EMI-24 curing agent.

TYPICAL PROPERTIES

Appearance	Pale Yellow Crystalline Solid
Melting Point, [°C]	36-42
Purity, [%]	87-92
Free Water (K Fischer), [%]	< 0.25
Molecular Weight, [g/mol]	110
Recommended use Level¹, [PHR]	1-4

TYPICAL HANDLING PROPERTIES (2 PHR)

Gel Time² (200g mix at 25°C), [min]	540
(200g mix at 70°C), [min]	33
(200g mix at 100°C), [min]	4
DSC Activation Temperature³, [°C]	95
Typical cure schedule:	
(i) 30 min @ 120°C	
(ii) 2h @ 80°C + 4h @ 150°C	

TYPICAL PERFORMANCE PROPERTIES⁴

Compressive Strength⁵, [MPa]	174
Tensile Strength⁶, [MPa]	62
Flexural Strength⁷, [MPa]	118
Heat Distortion Temperature⁸, [°C]	156

Footnotes:

- (1) With Bisphenol A diglycidyl ether (EEW=190)
- (2) Techne GT-3 Gelation Timer
- (3) Heating rate 10°C/min
- (4) 2 h @ 80°C plus 4 h @ 150°C
- (5) ISO 604
- (6) ISO 527
- (7) ISO 178
- (8) ASTM D648

Epoxy Curing Agents and Modifiers

IMICURE® EMI-24 Curing Agent

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