



DOCURE KH-3001

EPOXY CURING AGENTS and MODIFIERS

TECHNICAL DATA SHEET

GENERAL DESCRIPTION

DOCURE KH-3001 [2,4,6-Tris(Dimethylaminomethyl)Phenol] is a versatile curing agent for epoxy resins, both in its own right and also as an activator of other curing agent, including carboxylic acid anhydrides, amine adducts and polyamides. It is also the preferred curing agent for blends of liquid epoxide resin and liquid polysulphides.

APPLICATIONS

- Maintenance coatings for marine and industrial
- Primers, adhesives.
- As an activator of polyamide cures in castings, flooring, anhydride cures in castings laminates epoxide/polysulphide co-cures and stopping compounds.

SAFETY, STORAGE & HANDLING

At least 12 months from the date of manufacture in the original sealed container at ambient temperature. Store away from excessive heat and humidity in tightly closed containers.

*Refer to the Safety Data Sheet for KH-3001 curing agent.

PACKAGING

Drum of 200kg net weight

Can of 15kg net weight

TYPICAL PROPERTIES

State	liquid
T.A.V.*1(mgKOH/g)	610-635
Viscosity(cps@25°C)	120-250
Color(Gardner)	6Max.
Specific Gravity(@25°C)	0.97-0.99
Free water(%)	0.5Max.
Flash Point(closed cup)	140°C
Boiling point	250°C

*1. Total Amine Value(0.1N-HClO₄ Method)

TYPICAL HANDLING PROPERTIES

YD-128	100(by weight)
KH-3001	15(by weight)
Gel-time(@25°C/115g scale)	45min

CATALYTIC USAGE:

1) 5-15 parts per 100 parts of standard liquid

Epoxy resin having and epoxide equivalent weight of 187

2) 2-5 parts per 100 parts of resin as an activator for other curing agents

3) 5-15 parts per 100 parts of standard liquid epoxy resin in co-cure with liquid polysulphide

2. Test Results of Film Properties(dry time)

1) Dry time test results of phenalkamine type hardener with KH-3001 accelerator

Hardener		Phenalkamine(95%) + KH-3001(5%)	Phenalkamine(95%) + Competitor(5%)
@5°C	T2	6hrs 10min	6hrs 10min
	T3	10hrs 35min	10hrs 40min

2) Dry time test results of polyamide type hardener with KH-3001 accelerator

Hardener		Polyamide(95%) + KH-3001(5%)	Polyamide(95%) + Competitor(5%)
@25°C	T2	4hrs 10min	4hrs 00min
	T3	7hrs 20min	7hrs 20min

3) Dry time test results of polyamine type hardener with KH-3001 accelerator

Hardener		Polyamine(95%) + KH-3001(5%)	Polyamine(95%) + Competitor(5%)
@25°C	T2	4hrs 00min	4hrs 00min
	T3	4hrs 35min	4hrs 40min

3. GPC Analysis Results

Hardener	KH-3001	Competitor
Tris-2,4,6-(dimethylaminomethyl)phenol	88.01%	84.03%
Bis(dimethylaminomethyl)phenol	11.40%	15.33%
Total	99.41%	99.36%

4. Test Results of Amine Blushing & Greasing

1) Blushing & greasing test results phenalkamine type with KH-3001 accelerator

Hardener	Phenalkamine(95%) + KH-3001(5%)	Phenalkamine(95%) + Competitor(5%)
Amine blushing* (@5°C)	○	○
Greasing* (@5°C)	◎	◎

* ◎: Excellent, ○: Good, △: Normal, X: Bad

2) Blushing test results polyamide type with KH-3001 accelerator

Hardener*	Polyamide(95%) + KH-3001(5%)	Polyamide(95%) + Competitor(5%)
Amine blushing* (@5°C)	◎	◎

* ◎: Excellent, ○: Good, △: Normal, X: Bad

3) Blushing test results polyamine type with KH-3001 accelerator

Hardener*	Polyamine(95%) + KH-3001(5%)	Polyamine(95%) + Competitor(5%)
Amine blushing* (@5°C)	◎	◎

* ◎: Excellent, ○: Good, △: Normal, X: Bad

5. Test Results of Gel Time

1) Gel time test results with KH-3001 accelerator

Hardener	KH-3001	Competitor
Gel-time* (@25°C)	45.5min	45.2min

* Gel time (115g mix at 25°C with YD-128)