



SANHO CHEMICAL CO., LTD.

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KINGMIDE 74

KINGMIDE 74 is a an epoxy resin curing agent of polyaminoamide type that has a very low viscosity .

It's major applications include civil engineering , casting , grouting and adhesive for element.

1. SPECIFICATIONS

Appearance	: Brown-colored viscous liquid.
Viscosity (mPa · s /25°C)	: 500 ~ 1,000
Amine Value (JIS)	: 350±20
Colour (Gardner)	: 12 Max.
Sp.Gr. (25°C)	: 0.95
A.H.E.W.	: 110

2. RECOMMENDED MIXING RATIO

40~80 parts by weight to 100 parts of bisphenol-A type epoxy resin whose epoxy equivalent is about 190.

3. CURING CHARACTERISTICS

Epoxy resin	: Employed Bisphenol-A type epoxy resin whose epoxy equivalent weight is about 190.
Total mass	: 200 gram
Room temp.	: 23°C

EXOTHERMIC REACTION			
Mixing ratio = Epoxy resin / KINGMIDE 74	100 / 40	100 / 60	100 / 80
Peak exothermic time. (min.)	172	178	182
Peak exothermic temp. (°C)	36	40	43



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4. PHYSICAL PROPERTIES

Employed Bisphenol-A type epoxy resin whose epoxy equivalent weight is about 190.
 Curing time=7 days at 23°C (JIS K6911)

Epoxy resin / KINGMIDE 74	100 / 40	100 / 60	100 / 80
Tensile Strength (kgf/mm ²)	3.4	4.9	3.7
Flexural Strength (kgf/mm ²)	4.2	6.0	4.5
Flexural Modulus (kgf/mm ²)	1.3×10 ²	2.2×10 ²	1.5×10 ²
Compressive Strength (kgf/mm ²)	3.8	5.9	4.1
Izod Impact Strength (kgf/cm-cm)	1.2	2.0	3.3
Rockwell Hardness (M-scale)	33	49	39
Heat Distortion Temp. (°C)	39	41	38

5. LAP SHEAR STRENGTH

Mild steel plates with sand blast treatment were employed whereon the lap shear strength of the mixed resin of the epoxy resin and KINGMIDE 74 was measured.

Epoxy resin : Employed same epoxy resin as above 4.
 Curing time : 7 days at 23°C

Epoxy resin / KINGMIDE 74	100 / 40	100 / 60	100 / 80
Lap shear strength (kgf/cm ²)	179	168	179

6. CHEMICAL RESISTANCE

Weight change of the cured products of an epoxy resin (=employed the same epoxy resin as 4.) with KINGMIDE 74 was measured as follow after immerses them for a specified period into following chemical substances.

Curing time : 7 days at 23°C

Unit : %

Epoxy resin / KINGMIDE 74	100 / 40			100 / 40			100 / 80		
	1	7	30	1	7	30	1	7	30
Tap water	0.3	0.8	1.4	0.2	0.7	1.5	0.3	0.9	1.9
5% salt solution	0.2	0.7	1.4	0.2	0.6	1.4	0.3	0.8	1.8
10% caustic Soda Solution	0.2	0.6	1.2	0.2	0.6	1.2	0.3	0.7	1.5
10% ammonia Solution	0.2	0.7	1.4	0.2	0.7	1.4	0.3	0.8	1.8
5% sulfuric Acid Solution	0.4	0.9	1.6	0.4	1.0	1.9	0.9	2.8	5.0
5% hydrochloric Acid Solution	0.3	0.8	1.5	0.4	0.9	1.6	0.7	1.5	2.8
Kerosene	0.2	0.5	0.8	0.1	0.2	0.4	0.1	0.3	0.8
Isopropanol	1.5	2.9	3.7	1.4	3.4	5.7	2.2	5.4	10.9
Methyl-isobutyl-ketone	18.2	Broken	--	4.7	17.3	27.3	3.8	14.3	29.4