SANHO CHEMICAL CO., LTD.
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KINGCURE I-631

KINGCURE I-631 is a low uiscosity mannich type epoxy curing agent it has reen designed for use at low temperature and under conditions of high humidity KINGCURE I-631 can be blended with amidoamine or polyamide for concrete adhesives (including old to new concrete)

1. SPECIFICATIONS

Appearance ：Light yellow colour low viscous liquid.
Viscosity ：70 ~ 170 mPa·s (25℃)
Color (Gardner) ：7 Max.
Amine Value ：290 ± 15
Specific Gravity ：1.03(25 / 25℃)
A.H.E.W. ：105

2. RECOMMENDED MIXING RATIO

45~65 parts by weight to 100 parts of bisphenol-A type liquid epoxy resin whose epoxy equivalent weight is about 190.

3. CURING CHARACTERISTICS

3-1 Exothermic Reaction.

Epoxy resin ：bisphenol-A type liquid epoxy resin whose epoxy equivalent weight is about 190.
Total mass ：100g
Room temperature ：23℃

Epoxy resin / KINGCURE I-631	100 / 45	100 / 55	100 / 65
Peak exothermic time. (min.)	40	34	31
Peak exothermic temp. (℃)	150	172	169
Gel time (min.)	31	24	22

3-2 Drying Characteristics

Epoxy resin ：bisphenol-A type liquid epoxy resin whose epoxy equivalent weight is about 190.
By RCI Drying Recorder ：At 23℃

Epoxy resin / KINGCURE I-631			100 / 45	100 / 55	100 / 65
23℃	Set to touch	(hours)	2.7	2.4	2.2
	Tack free	(hours)	6.1	4.9	4.5
	Dry through	(hours)	8.2	6.7	5.8

◎Film thickness about 200um

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4. MECHANICAL PROPERTIES

Epoxy resin ：bisphenol-A type liquid epoxy resin whose epoxy equivalent weight is about 190.Precured at 23℃ for 7day

Epoxy resin / KINGCURE I-631		100 / 45	100 / 55	100 / 65
Tensile Strength	(kgf/mm^2)	5.8	6.1	6.4
Bending Strength	(kgf/mm^2)	8.2	9.0	8.3
Flexural Modulus	(kgf/mm^2)	3.0×10^2	3.3×10^2	3.1×10^2
Compressive strength	(kgf/mm^2)	8.1	8.0	7.6
Izod Impact Strength	(kgf/cm-cm)	1.7	2.0	1.8
Rockwell Hardness	(m-scale)	69	74	67
Shore D.	D-scale	81	82	81
Heat Distortion Temp	(℃)	43	47	46

5. CHEMICAL RESISTANCE

Epoxy resin：bisphenol-A type liquid epoxy resin whose epoxy equivalent weight is about 190Precured at 23℃ for 7 days

Measured the weight change of the cured products after immersing them into following chemical substrates

Unit：%

Epoxy Resin / K I-631	100 / 45			100 / 55			100 / 65		
Immersing time (days)	1	7	30	1	7	30	1	7	30
Tap water (23℃)	0.2	0.7	1.4	0.2	0.7	1.5	0.3	0.8	1.7
5% salt water solution	0.2	0.7	1.3	0.2	0.7	1.4	0.3	0.8	2.6
10% caustic soda solution	0.2	0.6	1.1	0.2	0.5	1.2	0.3	0.6	1.3
10% ammonia solution	0.3	0.8	1.7	0.3	0.9	2.0	0.4	1.1	2.3
5% sulfuric acid solution	0.3	0.8	1.6	0.4	1.1	2.2	0.7	1.8	3.7
5% hydrochloric acid solution	0.2	0.7	1.4	0.3	0.8	1.6	0.4	1.0	2.1
Kerosene	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.1
Isopropanol	0.0	0.2	0.1	0.0	0.1	0.7	0.0	0.1	0.7
Methyl isobutyl ketone	2.0	9.1	broken	0.7	2.8	6.4	0.4	2.0	4.6