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FUJICURE FXK-832

FUJICURE FXK-832 is a modified amine type hardener for the epoxy resin. This is a quick curing type hardener which enables curing at the relatively low temperature range. FUJICURE FXK-832 provides the cured products with superior water resistance and chemical resistance as well as smooth and glossy surface of no greasy stickness.

A coating film of FUJICURE FXK-832 shows good resistance against water even before it reaches the complete stage of curing. These characteristics of FUJICURE FXK-832 makes it very useful for coating, strong adhesive and sealants applications.

1. TYPICAL ANALYSIS

Appearance : Light yellow viscous liquid

Viscosity : 3,500 mPa⋅s (=Centipoises),at 25°C

Colour (Gardner) : 5
Amine Value (KOH-mg) : 380
Specific Gravity $(25/25^{\circ}\text{C})$: 1.06
Flash Point($^{\circ}\text{C}$) : 168 $^{\circ}\text{C}$

2. STANDARD MIXING (COMPOUNDING) RATIO

40 ~ 60 parts by weight of FUJICURE FXK-832 to 100 parts of a liquid epoxy resin of bisphenol-a type ,whose" epoxy equivalent weight" is 190.

3.

(1) Curing Characteristics

FXK-832 was mixed with a bisphenol-a type liquid epoxy resin, whose equivalent weight is about 190. The curing characteristics were observed as follow;

Curing condition: Total mass employed = 50 grs.

Temperature = at 23° C

Mixing Ratio: Epoxy resin/ FXK-832	100 / 40	100 / 50	100 / 60
Peak Exothermic Time(in minutes)	21	16	15
Peak Exothermic Temperature(°ℂ)	154	162	159

(2) Drying Characteristics

Employing the same epoxy resin as referred in the **3.**-(1), drying character-istics of the coating films of FXK-832 were observed as follow by rci Drying Recorder.

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Mixing ratio: Epoxy resin/FXK-832 100 / 40 100 / 50100 / 60Set to Touch Time (hours) 0.9 0.9 0.7 Tack Free Time (hours) 1.9 1.7 1.6 Dry Through Time (hours) 2.7 3.0 2.1

4. MECHANICAL (PHISICAL) STRENGTH PROPERTIES OF THE CURED PRODUCTS.

Employing the same epoxy resin as refereed in the 3.-(1), the cured properties after 7 days curing at 23° C were observed as follow:

Mixing ratio: Epoxy resin /	FXK-832	100 / 40	100 / 50	100 / 60
Tensile Strength	(kgf/mm²)	5.1	6.5	6.0
Flexural Strength	(kgf/mm^2)	8.1	9.7	9.0
Flexural Modulus	(kgf/mm^2)	4.3×10^{2}	4.3×10^{2}	4.5×10^{2}
Compressive Strength	(kgf/mm^2)	12.1	12.2	12.1
Izod Impact Strength	(°C)	2.4	2.6	2.7
Heat Distortion Temperature	(M Scale)	51	52	53
Rockwell Hardness		77	86	90
Shore-d Hardness		85	87	87

5. CHEMICAL RESISTANCE

Percentage increase in weight were observed as follow after immersing the same test pieces as 3--(1) at 23° C into the following chemical solutions.

Elapse of Time	1 day		7 days			30 days			
Mixing Ratio(phr)	40	50	60	40	50	60	40	50	60
Tap water	0.1	0.1	0.1	0.3	0.4	0.4	0.7	0.7	0.7
5% solution of salt	0.1	0.1	0.1	0.3	0.3	0.3	0.7	0.7	0.7
10% solution of Caustic soda	0.1	0.1	0.1	0.3	0.3	0.3	0.6	0.6	0.6
10% solution of Ammonia	0.2	0.2	0.2	0.4	0.4	0.4	0.8	0.9	0.8
5% solution of Sulfuric Acid	0.1	0.2	0.2	0.4	0.4	0.6	0.7	0.9	0.8
5% solution of Hydrochloric Acid	0.1	0.2	0.2	0.4	0.4	0.5	0.7	0.9	1.1
Kerosene	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
Isopropyl Alcohol	0.6	0.5	0.6	1.2	1.2	1.6	1.5	2.0	3.1
MIBK	13.6	7.0	5.9		14.3	14.0			