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# **FUJICURE 5000**

FUJICURE 5000 is low viscosity type epoxy curing agent of modified cycloaliphatic polyamine. This curing agent has good compatibility with epoxy resins. The curing and shaping of FUJICURE 5001 are excellent in high humidity or on the surface of the humid. The applications of FUJICURE 5001 include solvent coatings, and self-leveling coatings. It is also applied for adhesives, and castings.

# 1. SPECIFICATIONS

Appearance : Light yellow color, viscous liquid.

Viscosity (mPa·s /25°C)  $\vdots$  800 ~ 2500

Amine Value (JIS)  $365 \pm 15$ 

Color (Gardner) : 4 Max.

Specific Gravity  $(25 / 25^{\circ}C)$  : 1.02

Flash Point :  $114^{\circ}$ C

A.H.E.W. : 100

# 2. RECOMMENDED MIXING RATIO

50~70 parts by weight to 100 parts of bisphenol-A liquid whose epoxy equivalent weight is about 190.

## 3. CURING CHARACTERISTICS

## 3-1 Exothermic Reaction.

Epoxy resin : bisphenol-A type liquid whose epoxy equivalent weight is about

190.

Total mass : 100gRoom temperature :  $23^{\circ}$ C

Epoxy resin / FUJICURE 5000	100 / 43	100 / 53	100 / 66
Peak exothermic time. (min.)	95	78	67
Peak exothermic temp. (°ℂ)	126	159	170
Gel time (min.)	75	66	60



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# 3-2 Drying Characteristics

Epoxy resin : bisphenol-A type liquid whose epoxy equivalent weight is

about 190.

By RCI Drying Recorder : At  $23^{\circ}$ C and  $5^{\circ}$ C

Epoxy resin / FUJICURE 5000		100 / 43	100 / 53	100 / 66	
	Set to touch	(hours)	3.5	3.2	2.9
23°C	Tack free	(hours)	7.1	5.6	5.1
	Dry through	(hours)	14.3	9.6	8.7
	Set to touch	(hours)	6.8	6.3	6.0
5℃	Tack free	(hours)	15.8	14.3	13.8
	Dry through	(hours)	29.3	22.3	19.7

<sup>©</sup>Film thickness about 150um

# 4. MECHANICAL PROPERTIES

Epoxy resin: bisphenol-A type liquid whose epoxy equivalent weight is about 190. Precured at 23°C for one day After this cured at 80°C for 2 hours

Epoxy resin / FUJIO	100 / 43	100 / 53	100 / 66	
Tensile Strength	(kgf/mm <sup>2</sup> )	2.8	4.0	4.7
Bending Strength	$(kgf/mm^2)$	4.5	7.8	7.6
Flexural Modulus	$(kgf/mm^2)$	$3.5 \times 10^{2}$	$3.7 \times 10^{2}$	$3.6 \times 10^2$
Compressive strength	(kgf/mm <sup>2</sup> )	10.4	12.4	10.5
Izod Impact Strength	(kgf/cm-cm)	0.9	1.4	1.0
Rockwell Hardness	(m-scale)	68	70	69
Heat Distortion	$(^{\circ}\mathbb{C})$	47	49	49
Shore D		82	83	84

## 5. CHEMICAL RESISTANCE

Epoxy resin: bisphenol-A type liquid whose epoxy equivalent weight is about 190

Precured at  $23^{\circ}$ C for one day After this cured at  $80^{\circ}$ C for 2 hours

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



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Unit: %

Epoxy Resin / F-5000	100 / 43		100 / 53			100 / 66			
Immersing time (days)	1	7	30	1	7	30	1	7	30
Tap water	0.1	0.3	0.8	0.1	0.3	0.8	0.1	0.3	0.9
5% salt water solution	0.0	0.3	0.9	0.0	0.3	0.9	0.1	0.4	1.0
10% caustic soda solution	0.0	0.3	0.7	0.0	0.3	0.8	0.0	0.4	0.9
10% ammonia solution	0.1	0.4	1.0	0.1	0.5	1.0	0.2	0.5	1.0
5% sulfuric acid solution	0.3	0.6	1.3	0.8	1.6	3.2	2.7	5.8	12.7
5% hydrochloric acid solution	0.1	0.5	1.1	0.3	0.8	1.8	0.9	2.4	5.4
Kerosene	-0.1	0.0	0.0	-0.1	0.0	0.0	-0.1	0.0	0.0
Isopropanol	1.2	2.6	4.1	1.2	2.2	4.1	1.6	3.2	7.2
Methyl isobutyl ketone	25	broken	broken	16	27	broken	11	19	broken

# 6. HANDLING (SAFETY) PRECAUTIONS

Since FUJICURE 5000 is a modified-amine curing agent, it should be handled with normal care.

Avoid direct contact with any parts of human body. In the case of eye or skin contamination with FUJICURE 5000, the affected part must be first washed thoroughly with plenty of water and soap.

In the case of eye contact, consult a physician afterwards. Keep the container tightly. Seal and store in a cool and dry place away from open flames.

#### 7. IMPORTANT NOTICE

All statement technical information, data and recommendations contained in the catalogue are based on tests we believe to be reliable but those are not to be taken as any form of our guar-antes for specific properties of our product, nor for any particular applications.

Further study of individual user is requested in the actual usage. User shall determine the suitability of the product for his intended use before using.