



# SANHO CHEMICAL CO., LTD.

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## FUJICURE FXD-821

FUJICURE FXD-821 is a room-temperature epoxy resins curing agent. This modified aliphatic amine hardener is low viscosity and light in colour surface. Major applications of this FXD-821 include various types of surface coatings, self-leveling floors, resin mortars, adhesives, and casting.

### 1. SALES SPECIFICATION

|                              |                                       |
|------------------------------|---------------------------------------|
| Appearance                   | : Light yellow, Low viscosity liquid. |
| Viscosity (mPa · s /25°C)    | : 40 ~ 70                             |
| Amine Value (JIS)            | : 305 ±15                             |
| Colour (Gardner)             | : 3 Max.                              |
| Specific Gravity (25 / 25°C) | : 0.95                                |
| Flash point (°C)             | : 118                                 |
| A.H.E.W.                     | : 85                                  |

### 2. RECOMMENDED MIXING RATIO

40 ~ 50 parts by weight to 100 parts of Bisphenol-A type epoxy resin whose epoxy equivalent weight is about 190.

### 3. CURING CHARACTERISTICS

3-1 Epoxy resin : Employed Bisphenol-A type epoxy resin whose epoxy equivalent weight is about 190.

Total mass : 100 gram

Room Temperature : 23°C

| Epoxy resin / FUJICURE FXD-821   | 100 / 50 | 100 / 45 | 100 / 40 |
|----------------------------------|----------|----------|----------|
| Peak Exothermic Time (min.)      | 119      | 129      | 145      |
| Peak Exothermic Temperature (°C) | 126      | 113      | 88       |
| Gelling Time (min.)              | 93       | 100      | 108      |



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## 3-2 Drying characteristics

The drying characteristics of the coated films of the mixed resin of FXD-821 and the epoxy resin as employed above were measured by RCI drying recorder, as follow;

| Epoxy resin / FUJICURE FXD-821 |                     | 100 / 50 | 100 / 45 | 100 / 40 |
|--------------------------------|---------------------|----------|----------|----------|
| 23°C                           | Dry through (hours) | 18.2     | 17.8     | 18.2     |

◎film thickness about 150 μm, at 23°C

## 4. MECHANICAL/PHYSICAL PROPERTIES

Employed Bisphenol-A type epoxy resin whose epoxy equivalent weight is about 190.

Curing time=7 days at 23°C

| Epoxy resin / FUJICURE FXD-821 |                        | 100 / 50            | 100 / 45            | 100 / 40            |
|--------------------------------|------------------------|---------------------|---------------------|---------------------|
| Tensile Strength               | (kgf/mm <sup>2</sup> ) | 6.5                 | 6.1                 | 6.0                 |
| Flexural Strength              | (kgf/mm <sup>2</sup> ) | 10.1                | 10.4                | 9.9                 |
| Flexural Modulus               | (kgf/mm <sup>2</sup> ) | 3.8×10 <sup>2</sup> | 3.7×10 <sup>2</sup> | 3.7×10 <sup>2</sup> |
| Compressive Strength           | (kgf/mm <sup>2</sup> ) | 10.1                | 10.1                | 10.3                |
| Izod Impact Strength           | (kgf-cm/cm)            | 3.1                 | 2.6                 | 2.6                 |
| Rockwell Hardness              | (M Scale)              | 60                  | 64.5                | 61.5                |
| Heat Distortion Temperature    | (°C)                   | 46                  | 45.5                | 43                  |

## 5. CHEMICAL RESISTANCE OF THE CURED PRODUCTS

Percentage increase in weight of the cured products of FUJICURE FXD-821 and the same epoxy resin as employed above were measured as follow after being cured at 22~23°C for 7 days, and immersing into respective chemical substance.. UNIT : %

| Epoxy resin / FXD-821            | 100 / 50 |     |     | 100 / 45 |     |     | 100 / 40 |     |     |
|----------------------------------|----------|-----|-----|----------|-----|-----|----------|-----|-----|
|                                  | 1        | 7   | 30  | 1        | 7   | 30  | 1        | 7   | 30  |
| Tap Water                        | 0.2      | 0.5 | 1.2 | 0.2      | 0.5 | 1.1 | 0.2      | 0.4 | 1.0 |
| 5% solution of Salt              | 0.2      | 0.5 | 1.1 | 0.2      | 0.5 | 1.0 | 0.2      | 0.4 | 0.9 |
| 10% solution of Caustic soda     | 0.1      | 0.4 | 0.8 | 0.1      | 0.3 | 0.7 | 0.1      | 0.3 | 0.7 |
| 10% solution of Ammonia          | 0.2      | 0.5 | 1.1 | 0.2      | 0.4 | 1.0 | 0.3      | 0.6 | 1.1 |
| 5% solution of Sulfuric Acid     | 2.5      | 4.7 | 8.2 | 1.1      | 2.0 | 3.5 | 0.4      | 0.9 | 1.8 |
| 5% solution of Hydrochloric Acid | 0.8      | 1.5 | 2.8 | 0.3      | 0.8 | 1.6 | 0.3      | 0.6 | 1.1 |
| Kerocene                         | 0.0      | 0.0 | 0.0 | 0.0      | 0.0 | 0.0 | 0.0      | 0.0 | 0.0 |
| Isopropylalcohol                 | 1.9      | 4.0 | 7.5 | 1.6      | 3.6 | 7.1 | 1.6      | 3.9 | 8.2 |
| Methylisobutylketone             | 9.7      | C   | -   | -        | C   | -   | -        | C   | -   |



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### **6. HANDLING (SAFETY) PRECAUTIONS**

Since FUJICURE FXD-821 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 FXD-821, 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 sealed 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.