



## ***ADHESIVES AND ADHESIVE-RELATED PRODUCTS***

- 1. Pressure-Sensitive Adhesives (Cohesive Agents)**
- 2. Potting Resins for Artificial Kidneys (Hollow-Fiber Type)**
- 3. Resins for Anti-Corrosion Paints for Automobiles  
(for Improving Adhesion of Paints to Electrodeposition Steel)**
- 4. Binders for Fiber-Finishing Agents**
- 5. Binders for Fiberglass**
- 6. Curing Agents for Epoxy Resins**

### ***IMPORTANT :***

Before handling these products, refer to the current Safety Data Sheet for recommended protective equipment, and detailed precautionary and hazards information.



## 1. Pressure-Sensitive Adhesives (Cohesive Agents)

| Product                 | Principal Component<br>(Product form)                | Uses and Features  |
|-------------------------|--|--|
| <b>POLYTHICK 310-S</b>  | Polyacrylate solution of two-component type (Liquid) | POLYTHICK 310-S has good creep resistance. It is suitable for acetate substrates, because it contains no ester-type solvent.   |
| <b>POLYTHICK 410-SA</b> | Polyacrylate solution of two-component type (Liquid) | POLYTHICK 410-SA has good adhesion at low temperatures and to wet surfaces. It is suitable for paper and synthetic film labels.  |
| <b>POLYTHICK 430-SA</b> | Polyacrylate solution of two-component type (Liquid) | POLYTHICK 430-SA is a higher concentration type of POLYTHICK 410-SA.   |
| <b>POLYTHICK 470-S</b>  | Polyacrylate solution of one-component type (Liquid) | POLYTHICK 470-S has good adhesion at low temperatures and to wet surfaces. It is easy to handle because it is a one-component adhesive. It is suitable for adhesive sheets for automobile interior finish. |
| <b>POLYTHICK 610-SA</b> | Polyacrylate solution of two-component type (Liquid) | POLYTHICK 610-SA follows the curved surfaces of wires and coils well. It is suitable for polyester electric insulating tapes.  |
| <b>POLYTHICK 1001-S</b> | Polyacrylate solution of one-component type (Liquid) | POLYTHICK 1001-S has good removability. It is easy to handle because it is a one-component adhesive. It is suitable for surface-protection sheets for steel and plastic plates.                            |
| <b>POLYTHICK 5423A</b>  | Polyacrylate solution of one-component type (Liquid) | POLYTHICK 5423A strongly adheres to non-polar substrates. It is easy to handle because it is a one-component adhesive. It is suitable for polypropylene bags and envelope-sealing tapes.                   |

Polyisocyanate-type and melamine-type curing agents can be used for two-component pressure-sensitive adhesives listed above.

## 2. Potting Resins for Artificial Kidneys (Hollow-Fiber Type)

| Product                    | Principal Component<br>(Product form)       | Uses and Features  |
|----------------------------|---|--|
| <b>POLYMEDICA Products</b> | Polyurethane of two-component type (Liquid) | These products are used for potting a hollow-fiber type artificial kidney (attaching hollow fibers to the housing apparatus), used for artificial dialysis. They are also used as a potting resin for home and industrial water purifiers. |

### 3. Resins for Anti-Corrosion Paints for Automobiles (for Improving Adhesion of Paints to Electrodeposition Steel)

| Product   | Principal Component<br>(Product form)                        | Uses and Features  |
|---|--|--|
| <b>CHEMIOX KA-1000</b><br>(main component)<br><b>CHEMIOX KC-810</b><br>(curing agent) | Blocked polyurethane solution of two-component type (Liquid) | These products are easy to handle because there is no restriction of pot life.<br>They cure by heating from 120 to 140°C for about 30 minutes.<br>CHEMIOX KA-1000 / CHEMIOX KC-810 :<br>They are used as resins for anti-corrosion (chipping) paints for automobiles.  |
| <b>CHEMIOX KA-112</b><br>(main component)<br><b>CHEMIOX KC-505</b><br>(curing agent)  |  | CHEMIOX KA-112 / CHEMIOX KC-505 :<br>They are best suited for improving adhesion between a steel plate, such as a cationic electrodeposited one, and PVC resin. (CHEMIOX products are mixed with PVC sol, and the resulting mixture is coated to a steel plate and then baked.)<br>These products are also applicable to pre-coat metals (PCMs) for electrical home appliances.<br>Mixing ratios and curing temperatures are as follows :<br>CHEMIOX KA-1000 / CHEMIOX KC-810 = 100 / 17, 140°C<br>CHEMIOX KA-112 / CHEMIOX KC-505 = 100 / 30, 140°C |

### 4. Binders for Fiber-Finishing Agents

| Product                | Principal Component<br>(Product form)                   | Uses and Features  |
|------------------------|---|--|
| <b>PERMARIN UA-150</b> | Polyether-type polyurethane emulsion (anionic) (Liquid) | PERMARIN UA-150 forms a strong and elastic film, imparting high resiliency to cloth. It is mainly used for improving the tactile property. |

### 5. Binders for Fiberglass

| Product                    | Principal Component<br>(Product form)           | Uses and Features   |
|----------------------------|---|---|
| <b>MELPOL F-220</b>        | Modified polyether (Pellet)                     | MELPOL F-220 is used as a sizing agent for warp when weaving fiberglass. It can produce less fluffy glass cloth because it forms a flexible, spreadable film. It pyrolyzes at comparatively low temperatures (pyrolysis starts at approx. 250°C), and leaves almost no residue after burning.   |
| <b>ACROBINDER BG-7</b>     | Copolymer of butadiene and maleic acid (Liquid) | ACROBINDER BG-7 is used for fiberglass reinforced thermoplastic resins.   |
| <b>CHEMITYLEN PEB-13ST</b> | Bisphenol-type unsaturated polyester (Powder)   | CHEMITYLEN PEB-13ST is used as a binder for glass chopped strand mats. It can produce flexible, high tenacity fiberglass mats due to its high affinity to fiberglass. It allows glass chopped strand mats to be easily permeated with unsaturated polyester resins because it has a structure similar to that of unsaturated polyester resins. It provides cured products with high transparency and heat resistance. |

## 6. Curing Agents for Epoxy Resins

| Product                        | Principal Component<br>(Product form) | Uses and Features   |
|--------------------------------|---------------------------------------|---|
| <b>POLYMIDE L<br/>Products</b> | Polyamideamine (Liquid)               | These products are a variety of liquid polyamideamine-type curing agents for epoxy resins, and are assorted and divided into many grades with different amine values and viscosities. The resins cured with these products are durable and flexible, and show a marked adhesion to plastics and metals. These products are also suited as curing agents for adhesives and sealants used for civil engineering and construction work. See the table on page 4. |
| <b>REACT CA-101</b>            | Modified polyamine (Liquid)           | REACT CA-101 is liquid modified aliphatic polyamine-type curing agent for epoxy resins. It cures epoxy resins even at low temperatures. The curing reaction is influenced by carbon dioxide and moisture in air to a lesser degree. The resins cured with this product have excellent water resistance and chemical resistance. See the table on page 4.  |
| <b>DSA<br/>PDSA-DA</b>         | Alkenyl succinic anhydride (Liquid)   | These products are succinic anhydride with a long alkenyl group. The resins cured with these products have excellent electrical properties and flexibility. See the table on page 4.  |

## Appendix

### 1. Typical Properties of POLYIMIDE L Products

| Product                 | Appearance           | Color (Gardner) | Viscosity mPa · s | Amine Value |
|-------------------------|----------------------|-----------------|-------------------|-------------|
| <b>POLYIMIDE L-25-3</b> | Brown liquid         | 6               | 3,800 (40°C)      | 285         |
| <b>POLYIMIDE L-45-3</b> | Brown liquid         | 6               | 4,800 (40°C)      | 320         |
| <b>POLYIMIDE L-55-3</b> | Straw-colored liquid | 5               | 1,750 (20°C)      | 380         |
| <b>POLYIMIDE L-504</b>  | Brown liquid         | 7               | 2,000 (25°C)      | 300         |
| <b>POLYIMIDE L-2513</b> | Brown liquid         | 6               | 2,250 (30°C)      | 290         |
| <b>POLYIMIDE L-4051</b> | Straw-colored liquid | 4               | 300 (20°C)        | 345         |

### 2. Typical Properties of REACT CA-101

| Product             | Appearance         | Color (Gardner) | Viscosity mPa · s | Amine Value |
|---------------------|--------------------|-----------------|-------------------|-------------|
| <b>REACT CA-101</b> | Pale yellow liquid | 3               | 4,500 (20°C)      | 430         |

### 3. Typical Properties of DSA and PDSA-DA

| Product        | Appearance           | Color (Gardner) | Viscosity mPa · s | Acid Value |
|----------------|----------------------|-----------------|-------------------|------------|
| <b>DSA</b>     | Yellow liquid        | 5               | 700 (20°C)        | 412        |
| <b>PDSA-DA</b> | Straw-colored liquid | 9               | 1,500 (20°C)      | 350        |

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