

PRODUCTLIST

1 PERFORMANCE CHEMICALS FOR SYNTHETIC RESIN & RUBBER INDUSTRIES AND PAINT, INK & PIGMENT INDUSTRIES

1. Curing Agents for Epoxy Resins and Epoxy Resin Enamels
2. Pigment Dispersants (Oligomer type)
3. Emulsifiers for Emulsion Polymerization
4. Stabilizer for Emulsions and Latexes
5. Resin Modifiers
6. Internal Antistatic Agents
7. Mold Releasing Agents
8. Printing Ink Binders
9. Compounding Ingredients for Paints and Printing Inks
10. Polyurethane Coating Materials
11. Pigment Dispersants (Surfactant type)
12. Defoamers
13. Plasticizer for Polyurethane-based Sealant

2 PERFORMANCE CHEMICALS FOR COSMETICS, PHARMACEUTICALS, DETERGENTS AND AGRICHEMICALS

- Base Materials for Shampoos (Anionic Type)
- Base Materials for Shampoos (Amphoteric Type)
- Foam Stabilizers and Thickeners for Shampoos
- Base Materials for Skin Cleansings
- Base Materials for Hair Conditioners
- Compounding Ingredients for Cosmetics
- Emulsifiers for Cosmetics
- Tablet Binders
- Base Materials for Ointments
- Coating Agents for Tablets
- Germicides (Pharmaceutical Use)
- Other Products for Pharmaceuticals
- Base Materials for Detergents
- Germicides (Industrial Use)
- Additives for Detergents
- Base Materials for Household Softeners
- Industrial Defoamers
- Emulsifiers for Emulsifiable Concentrates
- Dispersants for Granule Preparations

3 PERFORMANCE CHEMICALS FOR POLYURETHANE AND POLYURETHANE-RELATED INDUSTRIES

1. Polyether Polyols for Slab Stock Flexible PU Foams
2. Polyether Polyols for Automotive Hot Mold Seat Cushions
3. Polyether Polyols for Automotive HR Mold Seat Cushions
4. Polyether Polyols for Crushpad Foams
5. Polyether Polyols for PU Exterior Parts
6. Polyether Polyols for Rigid PU Foams
7. Polyfunctional Polyols
8. Example of PU Foam System
9. Prepolymers and Raw Materials for PU Elastomers
10. Base Materials for Synthetic Leathers
11. Water-borne Polyurethanes for Textile Processing
12. Polyurethane Emulsions for Adhesives
13. Polyurethane Emulsions for Coatings

4 PERFORMANCE CHEMICALS FOR LUBRICANT INDUSTRIES AND MACHINERY & METAL PROCESSING INDUSTRIES

1. Lubricating Oil Additives
2. Base Materials for Synthetic Lubricants
3. Base Materials for Water-soluble Quenchants
4. Base Materials for Hydraulic Fluids
5. Materials for Brake Fluids
6. Rust Inhibitors
7. Water-soluble Cutting Fluids
8. Emulsifiers for Metal Working Oils
9. Base Materials for Metal Cleaners

5 PERFORMANCE CHEMICALS FOR RESOURCE EXTRACTION AND MINING INDUSTRIES

1. Water-soluble Polymers for Enhanced Oil Recovery (EOR)
2. Polymer Flocculants
3. Dewatering Accelerator
4. Cold Flow Improvers
5. Lubricity Improver
6. Dewaxing Aids
7. Drilling Fluid Additives

6 PERFORMANCE CHEMICALS FOR POLLUTION CONTROL

- Polymer Flocculants

8 PERFORMANCE CHEMICALS FOR CONSTRUCTION AND PUBLIC WORKS

1. Pavement Materials
2. Flooring Materials
3. Caulking Materials for Clay Pipe Joints
4. Water Sealants
5. Mud Dispersants for Drilling
6. Waterproofing Agents
7. Concrete Admixtures

9 ADHESIVES AND ADHESIVE-RELATED PRODUCTS

1. Pressure-Sensitive Adhesives (Cohesive Agents)
2. Hot Melt Adhesives
3. Dry Laminate Adhesives for Food-Packaging Films
4. Potting Resins for Artificial Kidneys (Hollow-Fiber Type)
5. Resins for Anti-Corrosion Paints for Automobiles (for Improving Adhesion of Paints to Electrodeposition Steel)
6. Binders for Fiber-Finishing Agents
7. Polyurethane Emulsion for Bonding Plastics, Cloth and Wood
8. Binders for Fiberglass
9. Curing Agents for Epoxy Resins

10 PERFORMANCE CHEMICALS FOR TEXTILE INDUSTRY

- Processes for Textile Manufacturing and Our Performance Chemicals
- 1. Polyester Textile
- 2. Nylon Textile
- 3. Acrylic Textile
- 4. Cotton Textile
- 5. Wool Textile
- Performance Chemicals for Textile Industry
- 1. Spinning Lubricants
- 2. Knitting and Weaving Oils
- 3. Scouring and Penetrating Agents
- 4. Dyeing Auxiliaries
- 5. Softeners
- 6. Other Finishing Agents
- 7. Modifiers for Polymers



ADHESIVES AND ADHESIVE-RELATED PRODUCTS

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IMPORTANT :

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

1. Pressure-Sensitive Adhesives (Cohesive Agents)

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

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

2. Hot Melt Adhesives

Product	Principal Component (Product form)	Uses and Features
YT-TACKY CA-300	Block-type thermoplastic elastomer (Solid)	Excels in adhesion to polyolefins and acrylic resins, and in sealing at low temperatures.
YT-TACKY S-2	Block-type thermoplastic elastomer (Solid)	Excels in adhesion to polyolefins and polyesters, and in coating due to the low melt viscosity.
YT-MELT SKR-500	Urethane Prepolymer (Solid)	Excels in adhesion to polyolefins, polyesters and chemical boards and in coating due to the low melt viscosity.

3. Dry Laminate Adhesives for Food-Packaging Films

Product	Principal Component (Product form)	Uses and Features
EXCELLAMI J-24	Polyurethane solution of moisture-curing type (Liquid)	Suitable for films used for packaging dry foods such as rice snacks and other snacks. EXCELLAMI J-24 can also be used for aluminum-deposited film.
EXCELLAMI AY-651A (main component) EXCELLAMI AY-651C (curing agent)	Polyurethane solution of two-component type (Liquid)	Excel in low-temperature storage stability. The cured product excels in heat resistance. Suitable for films used for packaging watery, frozen, and boiled foods, in addition to dry foods. Mixing ratio : EXCELLAMI AY-651A / EXCELLAMI AY-651C = 100 / 15

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

Product	Principal Component (Product form)	Uses and Features
POLYMEDICA Products	Polyurethane of two-component type (Liquid)	Used for potting a hollow-fiber type artificial kidney (attaching hollow fibers to the housing apparatus), used for artificial dialysis. Also used as a potting resin for home and industrial water purifiers.

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

Product	Principal Component (Product form)	Uses and Features
CHEMIOX KA-098 (main component) CHEMIOX KC-810 (curing agent) CHEMIOX KA-112 (main component) CHEMIOX KC-505 (curing agent)	Blocked polyurethane solution of two-component type (Liquid)	Easy to handle because there is no restriction of pot life. Cures by heating from 120 to 140 °C for about 30 minutes. CHEMIOX KA-098 / CHEMIOX KC-810 : Used as resins for anti-corrosion (chipping) paints for automobiles. CHEMIOX KA-112 / CHEMIOX KC-505 : 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.) These products are also applicable to pre-coat metals (PCMs) for electrical home appliances. Mixing ratios and curing temperatures are as follows : CHEMIOX KA-098 / CHEMIOX KC-810 = 100 / 17, 140 °C. CHEMIOX KA-112 / CHEMIOX KC-505 = 100 / 30, 140 °C.

6. Binders for Fiber-Finishing Agents

Product	Principal Component (Product form)	Uses and Features
PERMARIN UA-150	Polyether-type polyurethane emulsion (anionic) (Liquid)	Forms a strong and elastic film, imparting high resiliency to cloth. Mainly used for improving the tactile property.
PERMARIN UA-300	Polycarbonate-type polyurethane emulsion (anionic) (Liquid)	Suitable as a binder for various fibers, including synthetics. Forms a strong and elastic film, imparting high resiliency to cloth. Provides processed cloth with excellent washing resistance, dry cleaning resistance, and color fastness to rubbing. Used for binders of printing paste and various finishing agents.
PERMARIN UA-310	Polycarbonate-type polyurethane emulsion (anionic) (Liquid)	Suitable as a binder for various fibers, including synthetics. Forms a strong and elastic film, imparting high resiliency to cloth. Provides processed cloth with excellent washing resistance, and dry cleaning resistance. Used for binders of various finishing agents.
PERMARIN UA-50	Polyether-type polyurethane emulsion (anionic) (Liquid)	Crosslinks when heated to approx. 150 °C after drying. Forms a film excellent in color fastness to washing. Mainly used as an agent for shrink resistant wool finish.
PERMARIN UC-20	Polyether-type polyurethane emulsion (cationic) (Liquid)	Forms a very flexible film. Mainly used for pilling resistant finishes.

7. Polyurethane Emulsion for Bonding Plastics, Cloth and Wood

Product	Principal Component (Product form)	Uses and Features
UPRENE UXA-307	Polyester-type polyurethane emulsion (anionic) (Liquid)	Best suited for bonding plastic sheets, plywood, and cloth. Stable at pH 3 or higher. Can also be used as an adhesion improving additive for other emulsion-type adhesives. Particularly excels in creep resistance.

8. Binders for Fiberglass

Product	Principal Component (Product form)	Uses and Features
CHEMITYLENE GA-2	Polyester-type polyurethane emulsion (nonionic) (Liquid)	Highly compatible with aminosilane coupling agents. Forms a highly cohesive film. Used as a sizing agent for spinning of fiberglass and produces less fluffy fiberglass strands.
MELPOL F-220	Modified polyether (Pellet)	Used as a sizing agent for warp when weaving fiberglass. Can produce less fluffy glass cloth because it forms a flexible, spreadable film. Pyrolyzes at comparatively low temperatures (pyrolysis starts at approx. 250 °C), and leaves almost no residue after burning.
ACROBINDER BG-7	Copolymer of butadiene and maleic acid (Liquid)	Used for fiberglass reinforced thermoplastic resins.
CHEMITYLENE PEB-13ST	Bisphenol-type unsaturated polyester (Powder)	Used as a binder for glass chopped strand mats. Can produce flexible, high tenacity fiberglass mats due to its high affinity to fiberglass. Having a structure similar to that of unsaturated polyester resin, makes glass chopped strand mats easily impregnated with unsaturated polyester resin. Provides cured products with excellent transparency and heat resistance.

9. Curing Agents for Epoxy Resins

Product	Principal Component (Product form)	Uses and Features
POLYMIDE L Products	Polyamideamine (Liquid)	A variety of liquid polyamideamine-type curing agents for epoxy resins are assorted and divided into many grades with different amine values and viscosities. The resins cured with these curing agents are durable and flexible, and show a marked adhesion to plastics and metals. Also suited as curing agents for adhesives and sealants used for civil engineering and construction work. See the table below.
REACT CA-101	Modified polyamine (Liquid)	Liquid modified aliphatic polyamine-type curing agent for epoxy resins. 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 curing agent have excellent water resistance and chemical resistance. See the table below.
DSA PDSA-DA	Alkenyl succinic anhydride (Liquid)	Succinic anhydride with a long alkenyl group. The resins cured with these curing agents have excellent electrical properties and flexibility. See the table below.

Appendix

1. Typical Properties of POLYMIDE L Products

Product	Appearance	Color (Gardner)	Viscosity mPa · s	Amine Value
POLYMIDE L-15-3	Brown liquid	7	3,600 (65°C)	230
POLYMIDE L-25-3	Brown liquid	6	3,800 (40°C)	285
POLYMIDE L-45-3	Brown liquid	7	4,800 (40°C)	320
POLYMIDE L-55-3	Brown liquid	5	1,750 (20°C)	380
POLYMIDE L-504	Brown liquid	6	2,000 (25°C)	300
POLYMIDE L-2513	Brown liquid	6	2,250 (30°C)	290
POLYMIDE L-4051	Brown liquid	4	300 (20°C)	345

2. Typical Properties of REACT CA-101

Product	Appearance	Color (Gardner)	Viscosity mPa · s	Amine Value
REACT CA-101	Pale yellow liquid	3	4,000 (20°C)	430

3. Typical Properties of DSA and PDSA-DA

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

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CHEMITYLENE PEB-13ST	3	POLYMIDE L-2513	4
DSA	4	POLYMIDE L-4051	4
EXCELLAMI AY-651A	2	POLYTHICK 310-S	1
EXCELLAMI AY-651C	2	POLYTHICK 410-SA	1
EXCELLAMI J-24	2	POLYTHICK 430-SA	1
MELPOL F-220	3	POLYTHICK 470-S	1
PDSA-DA	4	POLYTHICK 610-SA	1
PERMARIN UA-50	3	POLYTHICK 1001-S	1
PERMARIN UA-150	3	POLYTHICK 5423A	1
PERMARIN UA-300	3	REACT CA-101	4
PERMARIN UA-310	3	UPRENE UXA-307	3
PERMARIN UC-20	3	YT-MELT SKR-500	1
POLYMEDICA Products	2	YT-TACKY CA-300	1
		YT-TACKY S-2	1