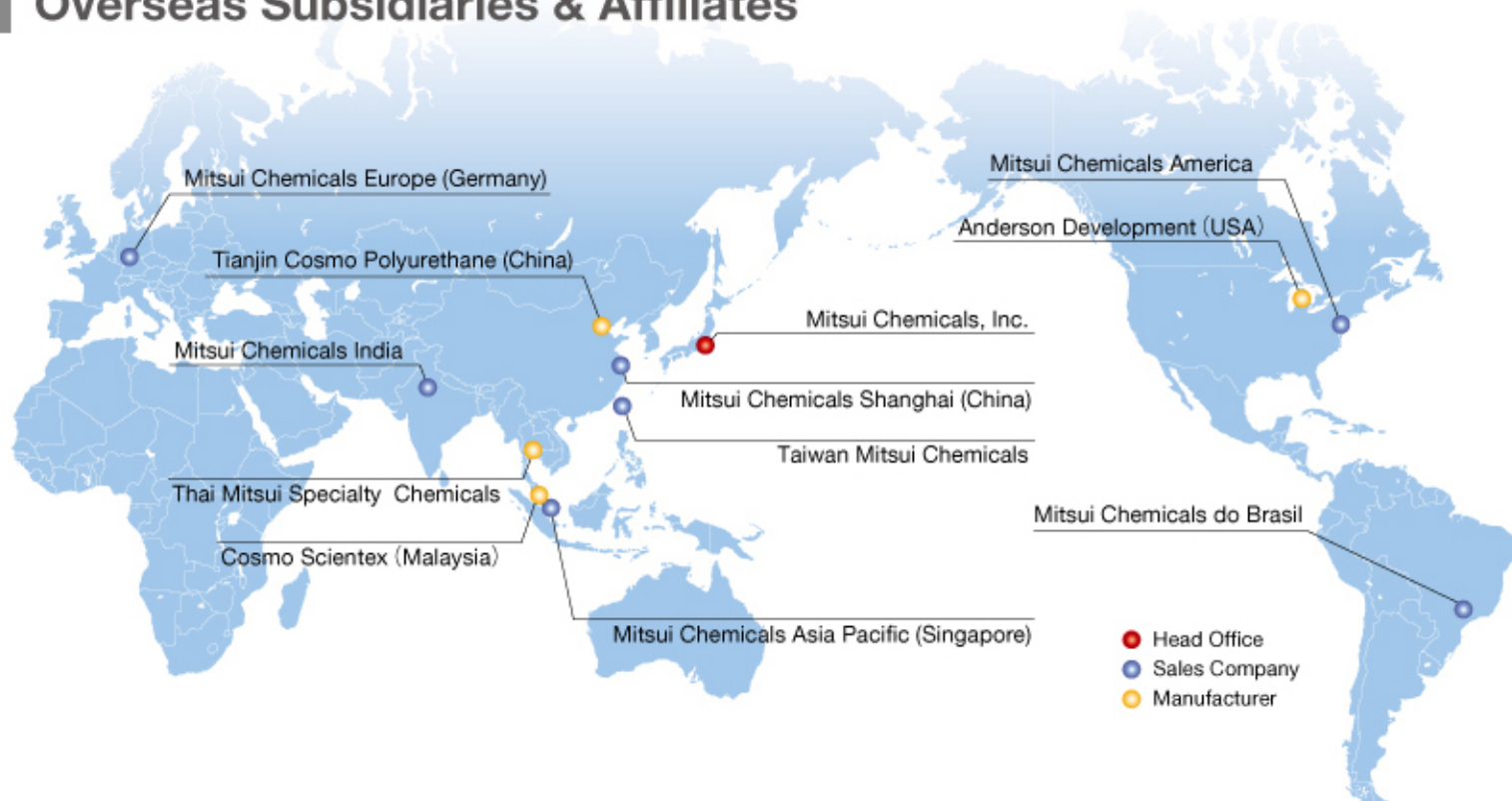


Overseas Subsidiaries & Affiliates



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Coatings & Engineering Materials Division

Product Catalog



Performance Coatings



The Coatings & Engineering Materials Division provides a wide variety of products, and meets our customers' individual needs.

- Coating materials
- Adhesives
- Elastic materials
- Low molecular weight polyolefin

Industrial Materials Dept.

Products	Resin type	Main Applications
● U-VAN™	Amino resin	Hardener of automotive paint (body coating), PCM (electronic appliances and architecture), baking paint for metal substrate (cell-phone etc.)
● ALMATEX™	Acrylic resin Polyester resin	PCM coating (electronic appliances and architecture), automotive paint, baking paint for metal substrate, architectural paint
	Water-base acrylic resin	Architectural paint
● OLESTER™	Acrylic polyol Polyester polyol	Woodwork paint (architecture), paint for plastic substrate (electronic appliances and architecture), paint for metal substrate (electronic appliances and architecture), inorganic paint for architecture
	UV curable resin (urethane acrylate, acrylic acrylate)	Primer for plastics and metals, base coating, hard coating (cell-phone, digital camera, PC etc.)
● EPOKEY™	Modified epoxy resin	Baking primer for metal substrate (information devices, PCM, etc.), air drying primer for metal substrate (heavy-duty coating, etc.)
● BONRON™	Water-base acrylic resin	Paper processing, impregnant for masking tape, thermal paper binder
● BARIASTAR™	Water-base acrylic resin	Thermal paper overcoat
● CHEMIPEARL™	Water-base polyolefin resin	Water-base rub-off agent for ink, additive for paint, heat seal agent, anti-blocking
● UNISTOLE™	Polyolefin resin	Primer for polyolefin (paint and adhesion), heat seal agent for polyolefins and metals

※ PCM: Coil coating

Specialty Additives Dept.

Products	Resin type	Main Applications
● Hi-WAX™	Low molecular weight polyolefin	Slip agent, dispersant, modifier and release agent for engineering plastics, release agent for toner, additives for ink and paint, textile treatment
● EXCEREX™	Low molecular weight polyolefin	Processing aid for film, sheet and injection molding, civil engineering, ink and paint modifier

Polyurethane Coating Materials Dept.

Products	Resin type	Main Applications
● TAKENATE™ D-, B-, M-, WD-series	Polyisocyanate	Polyurethane curing agent for paint (automobiles, electronic appliances, woodwork, architecture and PCM), ink, adhesive
● TAKELAC™ W-, WS-, WPB-, E-series	Water-base /solvent polyurethane resin	Polyurethane resin for paint (automobiles, electronic appliances, architecture and textile), ink, adhesive
● MT-OLESTER™	Polyurethane resin (moisture cured type, urethane lacquer)	Urethane coating resin for single component system (woodwork, elastic materials and leather)
● XDI (TAKENATE™ 500)	Xylylene Diisocyanate	Isocyanate monomer (raw materials of polyurethane resin)
● H₆XDI™ (TAKENATE™ 600)	1,3-Bis (isocyanatemethyl) cyclohexane	Isocyanate monomer (raw materials of polyurethane resin)

※ PCM: Coil coating

Polyurethane Elastomers Dept.

Products	Resin type	Main Applications
● TAKENATE™ L-series (for casting/architecture) F-series (for architecture)	Isocyanate terminated urethane resin	Prepolymer for civil engineering and architecture, castable polyurethane prepolymer
● HIPRENE™ L-, U-series (for casting) XL-, AX-series (for architecture)	Isocyanate terminated urethane resin	Prepolymer for civil engineering and architecture, castable polyurethane prepolymer
● TAKELAC™ P-, XL-series (for architecture)	Hydroxyl terminated urethane resin compound	Compound for civil engineering and architecture use

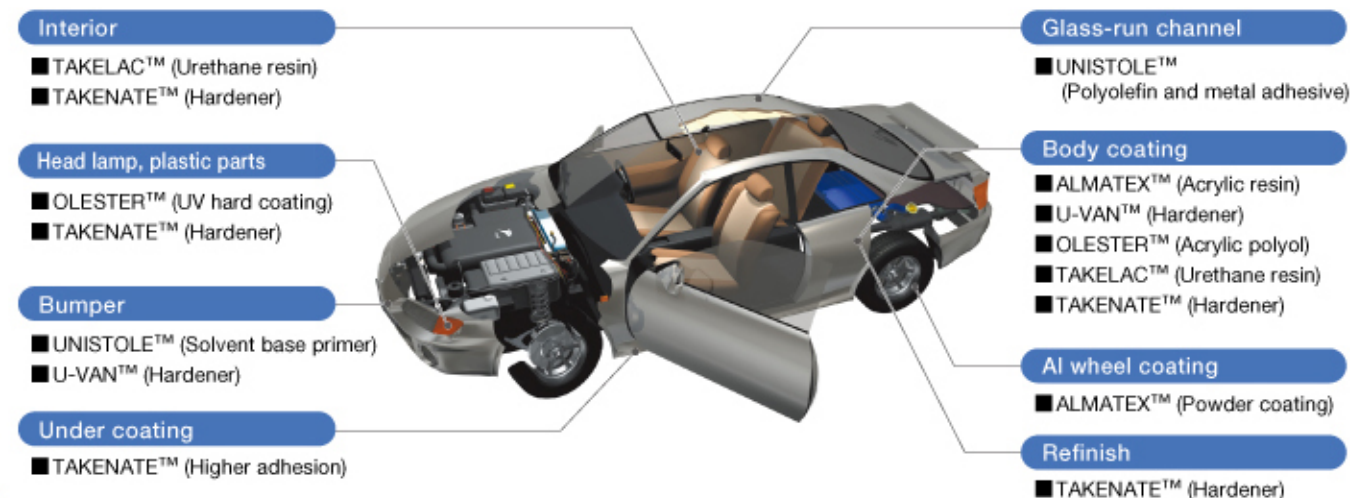
Adhesives Dept.

Products	Resin type	Main Applications
● TAKELAC™ A-series	Polyether Polyol Polyester Polyol	Adhesive for packaging films (anchorcoat agent for dry-lamination, non-solvent lamination and extrusion lamination)
● TAKENATE™ A-series	Polyisocyanate	Hardener of adhesive for packaging films (anchorcoat agent for dry-lamination, non-solvent lamination and extrusion lamination)
● STRUCT BOND™	Epoxy Resin Acrylic Resin	Sealant for LCD
● FTR™	Aromatic hydrocarbon resin	Hot-melt adhesive, acrylic pressure-sensitive adhesive, tackifier



Automobiles

Mitsui Chemicals offers advanced coating materials such as metal and plastics coating, bonding material of metal and plastics, etc. Moreover, we develop many kinds of environment-related products.



Information devices, electronic appliances and solar cell

Mitsui Chemicals contributes to coating materials that stick to light metals and plastics parts for further innovation of electronics and electric devices.



Architecture, paper, film, ink

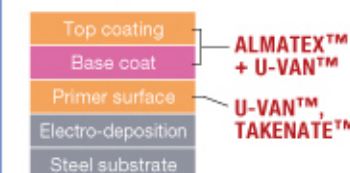
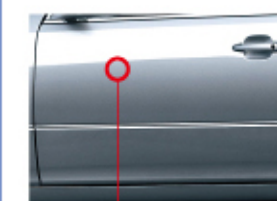
Mitsui Chemicals offers various coating materials such as coating resins and ink additives with low pollution, energy saving and high-definition characteristics.



Example of coating using our division's products

Color codes () indicate our division's products.

Automobile exterior (car body)



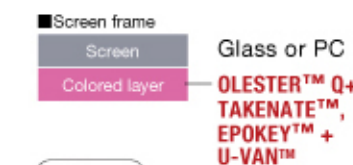
Features

•Weather resistance

Features

•Rub resistance
•Toughness improvement

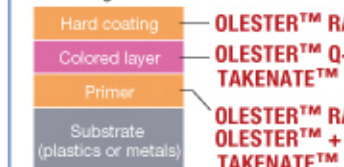
Smartphone • Cell-phone (housing and screen)



Features

•Higher adhesion
•Toughness

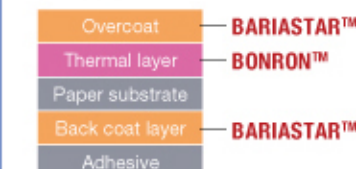
Housing



Features

•Flexibility
•Higher adhesion with plastics and metals
•Abrasion resistance
•Chemical resistance

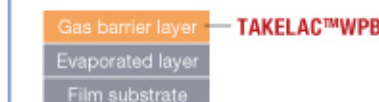
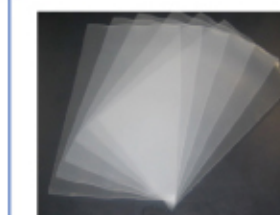
Thermal paper (POS label)



Features

•Solvent resistance •Plasticizer resistance
•Heat resistance •Water resistance
•Brightness

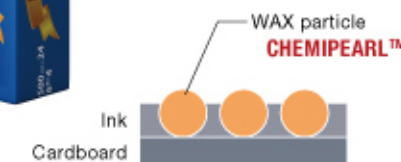
Gas barrier film (food package)



Features

•Special isocyanates based non-chlorine water-base dispersion
•Oxygen barrier

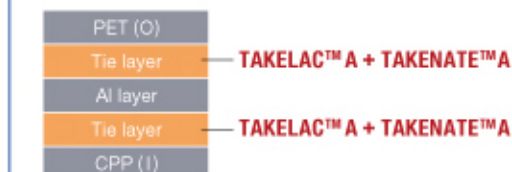
Flexographic ink (cardboard box)



Features

•WAX-based particulate water-base dispersion
•Rub-off resistance •Anti-blocking •Lubricity

Adhesive for films (food package)



Features

•Adhesive interaction of plain films, evaporated films and aluminum
•Food sanitation






Adhesives

Mitsui Chemicals contributes to various adhesives and bonding materials with functional, safety and health considerations based on polyurethane and oligomer technology.

Urethane Adhesive	● Applications	● Features
TAKELAC™ A- series Packaging adhesive	Anchorcoat agent for dry-lamination, non-solvent lamination and extrusion lamination ■ Food package (dry, retort, boiled, beverage) ■ Refill pouch ■ Back sheet of solar cell, architecture use	• Adhesive interaction of plain films, evaporated films and aluminum • Food sanitation
TAKENATE™ A- series Packaging adhesive (Hardener)	  	
Heat-Sealing	● Applications	● Features
UNISTOLE™	Adhesion between polyolefins and metals ■ Easy peel-off package, PTP package	• Adhesive interaction of polyolefins with metals • Low temperature heat sealing
	 	
CHEMIPEARL™	Heat seal agent for aluminum foil and paper ■ Chocolate wrapper, butter wrapper	• Polyolefin-based particulate water-base dispersion • No use of any emulsifying agent or solvent • Oil resistance • Non-odor
		
Sealant	● Applications	● Features
STRUCT BOND™	Main sealant for LCD panel	• Lower pollution for LC mixture • High adhesive strength
		
Tackifier	● Applications	● Features
FTR™	Hot-melt adhesive, acrylic pressure-sensitive adhesive and tackifier	• Colorless and transparency • Heat stability • Good compatibility with various plastics and elastomers • Good adhesion at high temperature





Elastic Materials

Mitsui Chemicals offers environmentally-friendly elastic resins for civil engineering, architecture and casting based on polyurethane technology.

Polyurethane Prepolymer	● Applications	● Features
TAKENATE™ L- series for casting/architecture F- series for architecture	Prepolymer for civil engineering and architecture ■ Flooring ■ Waterproof coat (hand-paint and spray) ■ Ground pavement (athletics stadium and trail)	• Soft gait performance • Crack elongation property • Water resistance • Quick curing properties
HIPRENE™ L-, U- series for casting XL-, AX- series for architecture	 	
TAKELAC™ P- series, XL- series for architecture	Castable Polyurethane Prepolymer ■ Rolls for the paper and steel industry and OA machine parts ■ Solid tire, gasket and bearing	• Water resistance • Chemical resistance • Heat resistance • Oil resistance • Solvent resistance • High impact resilience • Good compression set resistance • Non-yellowing and transparency
		

Low Molecular Weight Polyolefin

Mitsui Chemicals offers low molecular weight olefin polymers using our catalyst technology, which can be used not only for slip agent, dispersant and release agent, but also modifier for engineering plastics.

Low Molecular Weight PE·PP	● Applications	● Features
Hi-WAX™ PE WAX PP WAX	■ Pigment dispersant (masterbatch) and ink ■ Paint modifier and textile treatment ■ Modifier and release agent for engineering plastics ■ Slip agent for PVC ■ Release agent for toner	• High crystallinity • Heat resistance • Chemical resistance • Good compatibility and affinity
	   	
EXCEREX™ Metallocene PE WAX	■ Processing aid for film, sheet and injection molding ■ Civil engineering, ink and paint modifier	• Narrow composition distribution • Narrow molecular weight distribution • Non-sticky
	