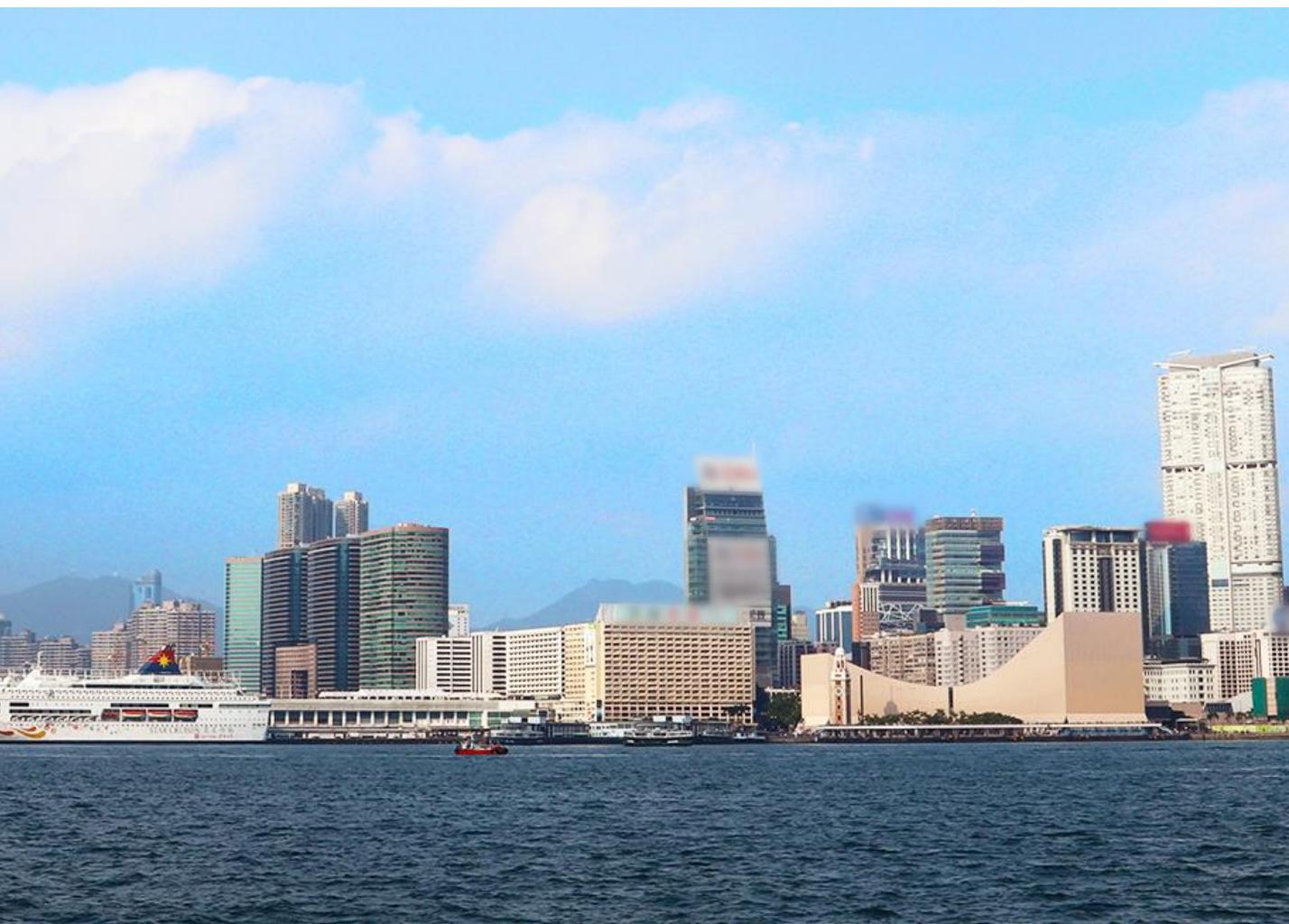


# Product Catalog



# INDEX

## Products Introduction By Usage

Electronics	.....	P1
Automotive	.....	P5
Fiber	.....	P8
Medical	.....	P9
Food	.....	P11
Construction	.....	P14

# Electronics

## Display



### ACRYPET™ PMMA Resin

ACRYPET™ methacrylic resin is an extremely high-quality material which has the highest degree of transparency among plastics as well as other excellent properties including weather resistance, chemical resistance and hardness.

Applications : Lens, optical sheets



### CLEARFIT™ Optical Clear Adhesive Sheet

This can be used as a filler between layers of panels used for touch panel and other types of displays. Using CLEARFIT™ to fill voids in the display prevents mirroring and improves both contrast and visibility.

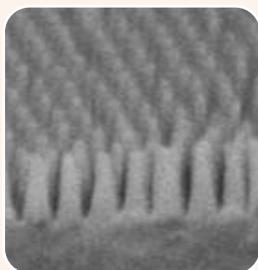
Applications : Inter-layer fill sheet for various types of displays



### LUMIREX™II Optical Reflective Sheet

This polyolefin-based white reflective sheet has excellent reflectiveness. Using LUMIREX™II as reflective sheets for liquid crystal backlights helps to improve brightness. It also prevents scratches and adhesion to optical sheet.

Applications : Reflective sheet for liquid crystal backlights and LED lighting



### MOSMITE™ Moth Eyes High-performance Film

Like the surface of moth's compound eyes, MOSMITE™ has evenly organized hundred-nanometer scale bumps on the surface. It has high transparency and reduces reflection. Base material + MOSMITE™

thickness = 89μm

Using MOSMITE™



Applications : Various types of displays, showcases, etc

# Electronics

## Electronics material



### DIAFIX™ PET-G Film / Sheet

PETG (amorphous PET polymer) and PC (polycarbonate) are used instead of vinyl chloride to make this card film/sheet. Various grades are available (thickness from 0.05mm to 0.8mm).

Applications : Magnetic cards (credit cards, cash cards, etc.), IC cards, ID cards



### DIANAL™ Acrylic Resin

A wide range of solid acrylic resins is available. Solvents and performance (physical properties) adjustments are possible. It is non-hazardous and easy for storage.

Applications : Conductive paste binder, Reactive hot melt adhesives, PCB dry film photoresist, plastic coating, ink



### jER® Epoxy Resin

jER® reacts with modifying agents (fillers, flexibility agents, diluents) and is used in many applications. Characteristics: excellent dimensional stability; adhesive to metal, porcelain, concrete, etc; high physical strength; excellent electrical insulation, flexibility, heat resistance, wear and abrasion resistance, chemical resistance, and moisture resistance.

Applications : Sealing material, laminating circuit board (green part), insulating coating

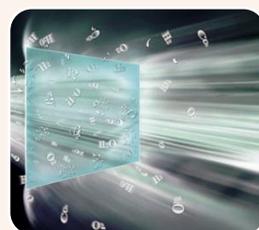


### Metalocene Plastomer m-PE KN

High Pressure Method Metalocene/Polyethylene

This is a revolutionary new polymer and metalocene-based plastomer which is very flexible and transparent with plastic and elastic properties. It can be used in low temperature sealing with high impact strength and flexibility.

Applications : Stretch file, display protection film, etc ※as an additive



### TECHBARRIER™ SiO<sub>x</sub> Vacuum Coated High Gas Barrier Film

This transparent gas barrier is coated with SiO<sub>x</sub> vacuum on OPET, ONY, etc. It is an excellent barrier against gases, water vapour with high odour and chemical resistance. It is printable and is easy to process in package making. It can be widely used for packaging materials in industrial market.

Applications : Protective packaging for IC card, etc

# Electronics

## Home & Office Appliances



### ACRYPLEN™ Acrylic Film

High transparency (total light transmittance of 93%) with excellent weather resistance. It can be thermally laminated to plastic sheets and films such as PC, PVC and ABS.

Applications : Paint-like finishing for appliances, high-brightness reflective materials



### DIACRON® Polyester Resin for Toner for Printers & Inks

Diacron is developed to respond to the increasing trends toward compactness and high speed of printers. Its sales is expanding in the market with increasing use of colour toners.

Applications : Printers and copiers



### DURABIO™ Bio-based Engineering Plastic

Biomass material, paint-less, BPA FREE

Applications : Smartphone front panel & back cover, display cover

Approval : USDA(56%48%38%) / Japan BP



### OPC Drum Organic Photoconductor

In laser printers and copiers, an image is formed by removing the static electricity from the part irradiated by the light of the electrically charged OPC (organic photoconductor) drum and adhering toner to the obtained electrostatic latent image.

Applications : Printers and copiers



### SUPERIO™ UT

Thermoplastic High Heat-resistant Engineering Plastic Film

Developed for electrical insulation, it has excellent heat resistance against polar solvent. Aluminum vapour deposition, plastic and metallic foil lamination are possible. It can be coated with adhesive or antistatic coating.

Applications : Diaphragm for earphone & speaker, lead tapes, heat resistant labels



# Electronics

## Measuring Equipment



### KARL FISCHER Moisture Measuring Device

Water content measurement to prevent adverse effects on the performance and reliability of electronic components and materials.

Applications : Moisture measurement of electronic components



### RESISTIVITY METER

Surface, high/low resistance region, volume resistivity measurement of metallic thin films, conductive paints and conductive plastics are possible.

Applications : Measurement of surface resistivity and volume resistivity of various materials



# Automotive

## Interior & Exterior



### ACRYPLEN™ Acrylic Film

High transparency (total light transmittance of 93%) and excellent optical performance at low haze value. Excellent weather resistance and processability.

Applications : Paint-like finishing, high-brightness reflective materials



### ACRYPET™ PMMA Resin

High transparency, weather and scratch resistance. Excellent hardness.

Applications : Interior & exterior, tail lamps, etc



### CLEARFIT™ Optical Clear Adhesive Sheet

This can be used as a filler between layers of panels used for touch panel and other types of displays. Using CLEARFIT™ to fill voids in the display prevents mirroring and improves both contrast and visibility.

Applications : Inter-layer fill sheet for various types of displays



### DIANAL™ Acrylic Resin

A wide range of solid acrylic resins is available. Solvents and performance (physical properties) adjustments are possible. It is non-hazardous and easy for storage.

Applications : Reactive hot melt adhesives for interior & exterior, coating for interior, exterior and leather sheet



### DURABIO™ Bio-based Engineering Plastic

High transparency, weather resistance and colourability. Biomass material, paint-less, BPA FREE.



Applications : Interior & exterior



# Automotive

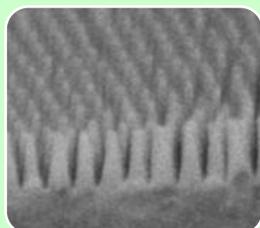
## Interior & Exterior



### jER® Epoxy Resin

jER® reacts with modifying agents (fillers, flexibility agents, diluents) and is used in many applications. Characteristics: excellent dimensional stability; adhesive to metal, porcelain, concrete, etc; high physical strength; excellent electrical insulation, flexibility, heat resistance, wear and abrasion resistance, chemical resistance, and moisture resistance.

Applications : Electrodeposition coating for the first layer of paint on a car



### MOSMITE™ Moth Eyes High-performance Film

Like the surface of moth's compound eyes, MOSMITE™ has evenly organized hundred-nanometer scale bumps on the surface. It has high transparency and reduces reflection. Base material + MOSMITE™

thickness = 89μm

Applications : Display

Using MOSMITE™



### PYROFIL® PAN-based Carbon Fiber

PYROFIL® is a high-performance carbon composite short fiber and is used in compounding with thermoplastic resin. It improves strength and elasticity, and enhances electrical conductivity, thermal conductivity and fatigue resistance.

Applications : Exterior parts



### REXPEARL™ Ethylene-based special copolymers

Flexible and highly adhesive. Excellent processability (formability) and adhesion to various substrate. It has excellent impact resistance and very high impact strength even at low temperatures.

Applications : Hot melt film for large area, adhesive for ceiling materials



### TEFABLOC™ Thermoplastic Elastomer

TEFABLOC™ is applicable to multi-layer molding with excellent flexibility and functionality. Various types are available (TPO, TPC, TPS, etc.) and can meet diverse requirement.

Applications : Window frame sealing material, interior & exterior parts



# Automotive

## Cables

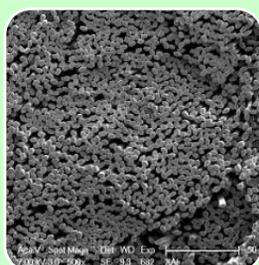


### OLEFISTA™ Halogen-free Flame Retardant Resin

Passed ISO 6722D authentication. Excellent heat resistance, flexibility, formability, and scratch resistance.

Applications : Cable coating materials, electrical equipment

## Sound Absorption



### XAI™ Ultra-fine Acrylic Fiber

XAI™ is an ultra-fine acrylic fiber with diameter of 3 $\mu$ m. When adding to sound absorbing felt, it improves sound absorption and contributes to weight reduction.

Applications: Internal sound absorption



# Fiber

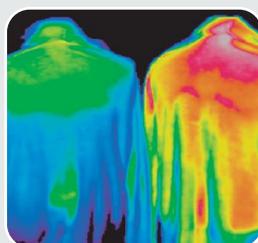
## Textile



### VONNEL™ Acrylic Staple Fiber

VONNEL™ is a wool-like acrylic fiber. It is soft, warm and light-weight, with a wide variety of cross-section available. It is easy to dye and possesses excellent fastness.

Applications : Fleece, sweater, underwear



### VONNEL COREBRID™ Acrylic Fiber

COREBRID™ is a light absorption heat generation conductive acrylic fiber. It converts sunlight into thermal energy and suppresses static electricity generated in clothing.

Applications : sweater, down jacket, gloves (for smartphone), anti static brush



### VONNEL MIYABI™ Micro Acrylic Fiber

MIYABI™ is an acrylic fiber with special polymers. It has a soft texture and anti-pilling property. It is easy to dye and possesses excellent fastness, such as washing fastness.

Applications : Underwear, woven, denim, etc

## Daily Necessity



### FINESPEC™ Acrylic-cellulosic Fiber Nonwoven Fabric

FINESPEC™ is a nanofiber nonwoven fabric which composite-spun acrylic-cellulosic fiber is physically splitted. It has good wiping properties against both water and oil stains, and can be used even in wet condition.

Applications : Wine glass / spectacles wipes



# Medical

## Medicament Packaging



### DIANAL™ Acrylic Resin

A wide range of solid acrylic resins is available. Solvents and performance (physical properties) adjustments are possible. It is non-hazardous and easy for storage.

Applications : Sealing for drug packaging, denture material



### Metalocene Plastomer m-PE KN

High Pressure Method Metalocene/Polyethylene

This is a revolutionary new polymer and metalocene-based plastomer which is very flexible and transparent with plastic and elastic properties. It can be used in low temperature sealing with high impact strength and flexibility.

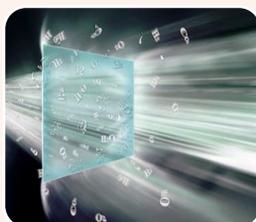
Applications : PTP(Aluminum foil), infusion bag, standing pouch



### MODIC™ Adhesive / Easy Peel Sealant Resin

MODIC™ is an adhesive resin whereby acid grafted polyolefin forms a layer or a coating to provide adhesion between materials. It has excellent adhesive performance, physical property and processability. It is good for food hygiene.

Applications : Multi-layer bottle, tube, extrusion lamination, medicament containers



### TECHBARRIER™ SiOx Vacuum Coated High Gas Barrier Film

This transparent gas barrier is coated with SiOx vacuum on OPET, ONY, etc. It is an excellent barrier against gases, water vapour with high odour and chemical resistance. It is printable and is easy to process in package making. It can be widely used for packaging materials in the industrial market.

Applications : Medicament & infusion bag packaging



### TEFABLOC™ Thermoplastic Elastomer

Excellent chemical resistance. It can be processed by various molding methods such as injection molding and extrusion molding.

Applications : Medical instruments (syringe parts, etc)



# Medical

## Device Housing / Display



### ACRYPET™ PMMA Resin

High transparency, weather and scratch resistance. Excellent chemical resistance and surface hardness.

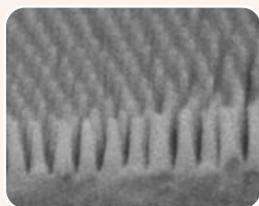
Applications : Medical equipment surface panel, touch panel



### DURABIO™ Bio-based Engineering Plastic

High transparency. Good appearance. Excellent scratch resistance and chemical resistance. Not easy to become yellow.

Applications : Device housing

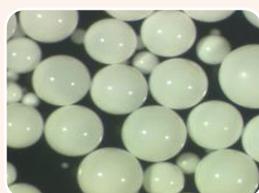


### MOSMITE™ Moth Eyes High-performance Film

Like the surface of moth's compound eyes, MOSMITE™ has evenly organized hundred-nanometer scale bumps on the surface. It has high transparency and reduces reflection. Base material + MOSMITE™ thickness = 89μm

Applications : Display of medical equipment

## Purification



### DIAION™ Ion Exchange Resin

DIAION™ is used in production of waters for industrial and medical uses such as soft water, demineralized water and ultrapure water. It is also used in the purification of medicines.

Applications : Ultrapure water for medicines

## Moisture Measurement



### KARL FISCHER Moisture Measuring / Reagent Device

Moisture management to prevent quality problems in storage of pharmaceutical products.



Applications : Moisture measurement of medicines, purity analysis of intermediates



# Food

## Food Packaging



### ACRYPET™ PMMA Resin

Excellent transparency, colourability, weather resistance and surface hardness. Approved by FDA: ACRYPET™ VH, MD, MF grades can be used for hot fill below 150°F (except for foods with alcohol content of more than 8%) and can be used for all types of food under sterilized conditions.

Applications : Various food containers



### DIANAL™ Acrylic Resin

A wide range of solid acrylic resins is available. Solvents and performance (physical properties) adjustments are possible. It is non-hazardous and easy for storage.

Applications : Sealing for packaging, ink binder for package printing



### HISHIPET™ PET Heat-Shrinkable Film

It has excellent shrinking properties to fit different bottle shapes. Labels can be set in any position. Superior transparency, clarity and glossiness for colourful printing. It can also protect the product from scratches, water and UV (UV protection type). It seals tightly around the caps of the bottles to prevent tampering.

Applications : Bottle PET film



### jER® Epoxy Resin

jER® reacts with modifying agents (fillers, flexibility agents, diluents) and is used in many applications. Characteristics: excellent dimensional stability; adhesive to metal, porcelain, etc; high physical strength; excellent electrical insulation, flexibility, heat resistance, wear and abrasion resistance, chemical resistance, and moisture resistance.

Applications : Coating (film thickness = few microns) for steel cans, aluminum cans



# Food

## Food Packaging



### Metalocene Plastomer m-PE KN

#### High Pressure Method Metalocene/Polyethylene

This is a revolutionary new polymer and metalocene-based plastomer which is very flexible and transparent with plastic and elastic properties. It can be used in low temperature sealing with high impact strength and flexibility.

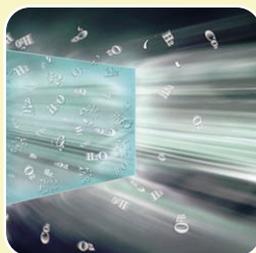
Applications : Stretch film, wrap film, liquid packaging, standing pouch



### MODIC™ Adhesive / Easy Peel Sealant Resin

MODIC™ is an adhesive resin whereby acid grafted polyolefin forms a layer or a coating to provide adhesion between materials. It has excellent adhesive performance, physical property and processability. It is good for food hygiene.

Applications : Multi-layer bottle, tube, extrusion lamination, hot melt film/adhesive for food containers



### TECHBARRIER™ SiO<sub>x</sub> Vacuum Coated High Gas Barrier Film

This transparent gas barrier is coated with SiO<sub>x</sub> vacuum on OPET, ONY, etc. It is an excellent barrier against gases, water vapour with high odour and chemical resistance. It is printable and is easy to process in package making. It can be widely used for packaging materials in the industrial market.

Applications : Various food packaging

## Purification



### DIAION™ Ion Exchange Resin

DIAION™ is used in production of waters for industrial use such as soft water, demineralized water and ultrapure water.

Applications : Water treatment and ultrapure water for food



# Food

## Food Additives



### ERYTHRITOL™(ERT) Low Calorie Sweetener

ERYTHRITOL™ is a sweetener classified as a natural sugar alcohol. It is recognized by the Ministry of Health and Welfare in Japan as a 0kcal/g sweetener. It is an ideal sugar substitute for diabetics and health-conscious people.

Applications : Beverage, bakery products



### RYOTO™ Sugar Ester (SE) Food Emulsifier

RYOTO™ Sugar Esters (SE) is food emulsifier (non-ion surfactants) which is composed of sucrose and fatty acids of vegetable origin. It improves the stability of food and beverage.

Applications : Soy milk, dairy products, oil products, frozen food, noodles



### RYOTO™ Sugar Ester (SP/SPOP) Foaming agent

RYOTO™ SP is a foaming agent made from emulsifier and carbohydrates. It improves the foaming of the dough and its stability. You can easily make high-quality cakes without failure.

Applications : Sponge cake, cookie, bakery products

## Measuring Equipment



### KARL FISCHER Moisture Measuring Device

Trace moisture measurement to prevent adverse effects on the reliability of food and ingredients.

Applications : Food moisture measurement



# Construction

## Construction Materials



### ACRYPLEN™ Acrylic Film

High transparency (total light transmittance of 93%) and excellent optical performance at low haze value. Excellent weather resistance and processability.

Applications : Paint-like finishing, high-brightness reflective materials



### DIANAL™ Acrylic Resin

It improves adhesion and weather resistance. Drying speed can be adjusted.

Applications : Road marking, anti-slip paint

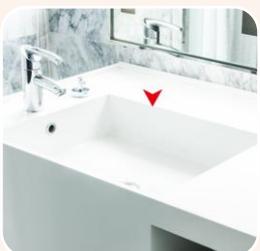


### jER® Epoxy Resin

jER® reacts with modifying agents (fillers, flexibility agents, diluents) and is used in many applications. Characteristics: excellent dimensional stability; adhesive to metal, porcelain, concrete, etc; high physical strength; excellent electrical insulation, flexibility, heat resistance, wear and abrasion resistance, chemical resistance, and moisture resistance.

Applications : Flooring (waterproof coating, corrosion resistant concrete)

## Artificial Marble



### ACRYPET™ PMMA Resin

Excellent colourability, weather resistance and surface hardness.

Applications : Artificial marble



# Construction

## Sound Barrier



### ACRYPET™ PMMA Resin

High transparency. Good appearance. Excellent colourability, weather resistance and surface hardness.

Applications : Sound barrier

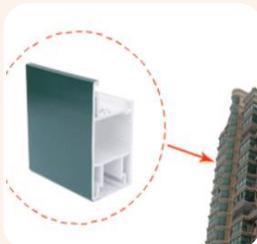


### DURABIO™ Bio-based Engineering Plastic

High transparency. Good appearance. Not easy to turn yellow. Excellent abrasion resistance and chemical resistance.

Applications : Sound barrier

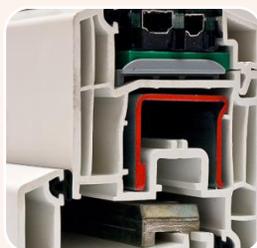
## Window Materials



### ACRYPET™ PMMA Resin

Excellent transparency, colourability, weather resistance, chemical resistance, and surface hardness.

Applications : Window frame covering material



### TEFABLOC™ Thermoplastic Elastomer

TEFABLOC™ is applicable to multi-layer molding with excellent flexibility and functionality. Various types are available (TPO, TPC, TPS, etc.) and can meet diverse requirement.

Applications : Door and window sealing material



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