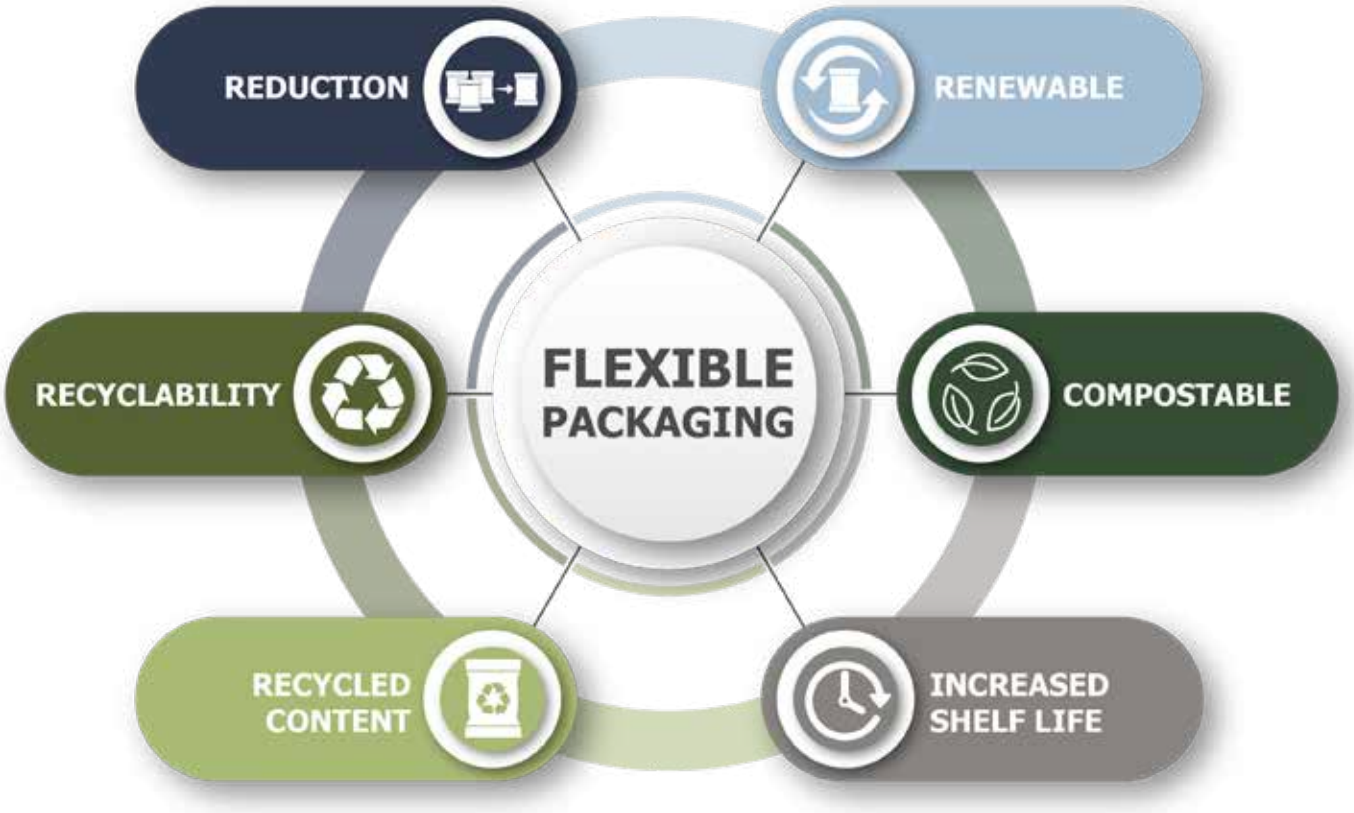
One-Stop Shop for Flexible Packaging

Our commitment to sustainability and the global shift towards utilizing eco-friendly materials drives the Mitsui Plastics packaging division. We offer an extensive line of flexible packaging solutions suitable for all industries that meet or exceed product specifications of traditional materials.



Flexible Packaging

Flexible packaging is versatile, light weight and low cost. We have you covered for all your flexible packaging needs, supplying high-quality resins and film roll stocks. As part of our commitment to providing eco-friendly options, we offer bio-compostable and sustainable materials to help minimize the negative impact on our environment.

Reduction

mLLDPE (Metallocene Linear Low Density Polyethylene)

- Superior strength, clarity and heat-seal properties while providing opportunities to downgauge.
- Provides an exceptional balance of physical properties and processability.

Barrier Paper

- Looking to reduce your use of plastics in your flexible packaging? Take a step to achieving your plastic reduction goals and simplifying your packaging structure by utilizing our portfolio of fiber based barrier materials.
- Options include bleached, unbleached papers and metallized options designed to provide barrier against oxygen, aromas, water vapor, grease, and solvents.
- Help your packaging stand out with grades optimized to provide high quality print surfaces.
- Various sealant layer chemistries can be applied depending on your packaging goals.
- Need help picking the best sealant layer solution, we can help.

Everglide®

- This Ultra High Molecular Weight Siloxane technology gives users a unique set of processing benefits, ranging from thermal and COF stability, increased scratch and mar resistance, and excellent print and paint adhesion.
- Traditional additives such as Erucimides “bleed out” and require overengineered formulations - Everglide® is permanent, non-migratory and can achieve better processing with lower dosage.
- Everglide® products are PFAS-free and a perfect solution for those looking to replace traditional fluoro processing aids.

Recycled Content

PET Melt Viscosity Improver

- For those looking to increase the rPET content in their products, our PET melt viscosity improver is a clever solution.
- Using this additive to increase the melt viscosity of polyester, customers have the flexibility to increase impact strength and improve processing, all while adding more recycled material into their system.
- Potential to improve yellowness index of rPET when using this Melt Viscosity Improver.

MAH-Polymers

- Trying to get extra performance out of your PCR-containing compounds? With our Maleic Anhydride (MAH) grafted polymer masterbatches, customers can improve compatibility between PCR/Virgin resin resulting in better mechanical properties across the board – tensile strength, flexural strength, impact strength, etc.
- Mitsui's MAH-polymers are low VOC, and minimize free Maleic Acid content on the final polymer – leaving customers with less worry of polymer degradation.

POE (Polyolefin Elastomer)

- Provides critical durability benefits such as impact, puncture and high-heat resistance for Retort packaging (sterilization and packaged food)
- Boasts high clarity and anti-whitening resistance properties.
- Additional functional properties include Low Heat Seal Initiation Temperature (HSIT), Hot-tack properties and Easy-peel or Easy-open function.

Renewable

TPX™

- With high heat resistance, this plastic resin is suitable for high-temperature applications. It features a low surface tension, second lowest compared to fluorine polymers, giving it excellent release-ability against various materials.
- It has a high chemical resistance compared with traditional polymers.
- TPX™ (PMP) has excellent transparency and high UV transmittance, comparable to that of glass. Its low density makes PMP ideal for applications requiring a light weight.
- As of November 2021, TPX™ will include material derived from renewable hydrocarbons.

Ultra High Molecular Weight Polyethylene (UHMWPE)

- As of November 2021, this resin is produced using renewable hydrocarbons originating from biogenic materials. These materials come from oils, fats, waste and residues of vegetable origin or from waste animal fat materials. These renewable hydrocarbons are deemed Kosher and Halal by relevant authorities.

Flexible Packaging

Recyclability

ZrXL Series

- Additive blend that protects polyolefins 1-5 passes through the extruder with minimal polymer degradation.
- Designed to protect color, melt flow, and polymer integrity including low odor.

Acid Scavenger

- Offerings range from different synthetic hydrotalcites to metallic soaps, including regular type hydrotalcite as well as dehydrated hydrotalcite.
- Regular-type hydrotalcite is commonly used in polyolefin production.
- Dehydrated hydrotalcite is used in production where higher processing temperature is needed.
- Zinc-type hydrotalcite is also available.
- Metallic soaps include calcium stearate, zinc stearate and magnesium stearate.

Increased Shelf Life

EVOH (Ethylene Vinyl Alcohol Copolymer)

- Specialty polymer to provide superior barrier against the transmission of gases and other volatile products.
- Excellent chemical and oil resistance.
- Various grades of EVOH available containing between 29-44% of ethylene.

POK (Polyketone)

- Only engineered polymer that has a carbon footprint as low as Polyolefins.
- For every two tons Polyketone produced, one ton carbon dioxide removed from the environment.
- Oxygen barrier properties at similar levels to EVOH depending on application details.

Nylon

- Acts as a Medium Barrier and offers puncture resistance, and rigidity.
- Heat resistant properties.

Compostable

Bio-Based PBS

- Patented, certified-compostable resin offers high temperature resistance, good heat sealing at low seal temperatures, good printability without pretreatment.
- Compatible with natural fibers and other biodegradable materials, excellent processability and is food-contact approved.

Polylactic Acid (PLA)

- Your go to solution if seeking a plant-based and compostable resin, and looking to significantly reduce your carbon footprint. PLA is certified compostable and it's applications are limitless - from flexibles to non-wovens and more. PLA offers the highest of optical clarity in the bioplastic offerings today. PLA is also compatible for compounding with PBS, PBAT and more recently, PHA.

Polybutylene Adipate-Co-Terephthalate (PBAT)

- These resins offer a lower cost alternative solution for compostable packaging and film. PBAT exhibits a wide melting point with good flexibility and toughness, thereby ideal for blending with TPS. PBAT is excellent for use in flexible packaging such a produce or shopping bags, mulch film and extrusion coating.

RTU Compostable Compounds

- Technological solutions can be found through the use of RTU (Ready-to-Use) compounds for enhanced performance and processability. Available options including a range of injection molding, ISMB, extrusion coating, and extrusion/thermoforming compounds to provide a solution for transforming to a circular economy.

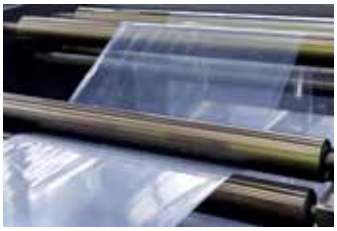
Flexible Packaging

Application Examples

PFAS-Free Process Aid – Everglide®
PFAS processing aids are labeled 'forever chemicals' due to the fact they don't break down over time. Paired with studies showing adverse health effects, there is a growing market movement away from PFAS-based processing aids. How2Recycle announced in December 2021 that packaging containing PFAS will now be assigned the "Not Yet Recycled" How2Recycle label.

Mitsui is proud to offer Everglide®, a PFAS-free processing aid that users can find perform well when compared with traditional fluoro-materials. With Everglide®, film producers will achieve excellent melt processability, print adhesion, and a stable COF over a broad temperature range, allowing faster speeds on lines. Mitsui will work with you to fine-tune your additive approach to get the most out of your film production while moving away from traditional PFAS PPAs.

BioBased Lubricant – Everglide®
Looking for a processing aid with roots in renewable resources? Everglide® Performance Series is a collection of formulated lubricant masterbatches based on green/renewable resource additive technology. Designed with performance in mind, Everglide® PS gives users a chance to match performance of a standard Everglide® material at an additional cost savings. For those looking to make an injection molded product, just 2% dosage of Everglide® PS can improve COF in processing and abrasion resistance of final product.



e·qui·b recycled content

e•qui•b - Recycled Content

Flexible Packaging with a purpose. We offer various film constructions and flexible packaging formats and each e•qui•b recycled content packaging contains high quality recycled content. Meet your customers performance requirements without asking them to sacrifice their sustainability goals. Each e•qui•b recycled content package contains recycled material diverted from landfills that is superior in performance when compared to traditional mechanically recycled resins.

Product Benefits:

- High Quality, Virgin-like Plastic Resin Performance
- Diverts Difficult To Recycle Waste
- Greenhouse Gas Reduction
- Increased Recycled Content
- Helps Meet ESG Goals

Learn More:

e·qui·b mass balance

e•qui•b - Mass Balance

As the demand for eco-conscious packaging rises, we are poised to increase the percentage of bio-based renewable sources going into our production lines. Using e•qui•b's mass balance products are vital to help us move away from reliance on non-renewable resources and work towards a more sustainable future. The mass balance approach is applied to all e•qui•b's products, such as shelf stable dry foods, frozen foods, industrial products, pharmaceuticals, apparel, and more.

Product Benefits:

- Reduces greenhouse gas emissions
- Saves fossil resources
- Mass balance products ensure identical product quality and properties
- Uses renewable resources
- No need to adapt formulations, equipment, or processes

Learn More:

The Future Of Packaging Is Sustainable

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