



THE WORLD'S
FIRST
PALM STEARIN
BIOHYBRID
RESIN





About Gaia Greentech

Established in 2020, Gaia Greentech is focused on biotechnology with an emphasis on green technology to create products that are more environmentally friendly. Our vision is to realise meaningful purpose in producing products that are safe for consumption and protecting the best interests of the people and the planet earth.

Through the use of science and technology, Gaia Greentech aims to tackle a variety of issues including finding practical solutions for global warming, promoting biodiversity and ensuring food security. We believe in the '3C' goals – COMMITMENT towards innovative solutions, COST competitiveness in manufacturing of products and CONTRIBUTION to green products offering.





eJau™ biohybrid resin is an innovative thermoplastic resin derived from a combination of palm stearin and High Density Polyethylene (HDPE). It offers a sustainable option in a market that is now placing increasing importance of minimising impacts on our environment by using latest technologies.

Renewable resource-based resin

eJau™ uses palm stearin, a solid fraction of palm kernel oil that is produced by partial crystallisation at controlled temperature. Palm stearin is a material that has high plasticity characteristics.

Reduces dependency on fossil-based plastic

eJau™ promotes up to 40% replacement of petroleum-based polymer in plastic products with renewable material palm stearin.

Minimises plastic pollution

Sets the pathway for potential carbon footprint load reduction within the plastic manufacturing industry by reducing greenhouse gas emissions.

Recyclable bioplastic

Bioplastic can be recycled just like conventional plastic, and can be perfectly integrated in established recycling streams.

Provides a drop-in solution

Plastic manufacturers can use eJau™ biohybrid resin to produce plastics products using standard polymer processing technologies, such as injection moulding, blow moulding, and blown film extrusion.



A drop-in solution for plastic manufacturing using eJau™ biohybrid resin

eJau™ is a practical solution for manufacturers to produce plastic products using standard polymer processing technologies. Our biohybrid resin uses a special formulation which can be customised with up to 40% renewable and biodegradable material so you can achieve an environmentally-friendly product.

Palm Stearin

Mineral

HDPE



Blow Moulding

eJau™ biohybrid resin can be transformed into plastic articles using the blow moulding process. Our resin is safe for food contact, and can be reused and recycled.

*Suitable for:
Containers, bottles*

Material composition used in the development of eJau™ biohybrid resin are:

High Density Polyethylene (HDPE)

A petroleum-based polymer that is extremely resistant to many chemicals and is safe for food contact. This material can be reused and recycled.

Palm Stearin

A by-product of palm oil processing, palm stearin is used as a plasticiser in our biohybrid resin. The palm stearin content can be adjusted up to 40% according to manufacturing requirements.

Mineral

We add calcium carbonate to improve the sustainability and properties of our materials.

Injection Moulding

eJau™ biohybrid resin is just as capable as conventional resins in the process of injection moulding with no additional equipment needed to accommodate the material.

*Suitable for:
Industrial bins, cutleries, tray, clothes hangers*

HDPE

Palm Stearin



Film Extrusion

eJau™ biohybrid resin is suited as feedstocks for the film extrusion process in producing daily plastic materials. Bio-based plastic products significantly lower the greenhouse gas emissions which can help preserve our environment.

*Suitable for:
Plastic mulch, shopping bag, frozen food packaging, barrier film*

HDPE

Palm Stearin





Have a chat with us.

Let us guide you through how **eJau™** can help you build sustainable credentials.


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