

GLASEL's efforts to reduce carbon-dioxide emissions

Using plant-derived polyethylene (bio-PE)

As environmental and energy-related issues such as global warming and the exhaustion of oil reserves come into close-up,

the focus is now on carbon-neutral* plant-based plastics (biomass), which pose less of an environmental burden, as substitutes for conventional petroleum-based plastics.

GLASEL works with many types of eco-friendly plastics. In particular, we are interested in bio-PE and encouraging its use because it can be used like conventional PE.

* Carbon-neutral

Plastics made from plant material are environmentally friendly because they do not theoretically result in net CO₂ emissions even if they are incinerated or disposed, as the plants from which they are made absorb CO₂ as they grow.

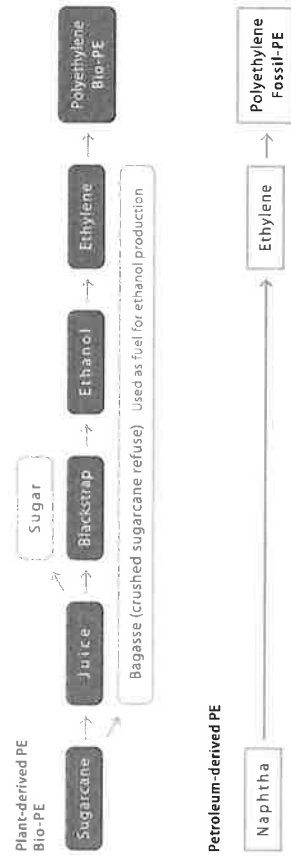
Bio-PE

Bio-polyethylene (bio-PE) is manufactured using ethylene derived from bioethanol, which is made from plant material as its raw ingredient.

Bio-PE featured in this catalog is made from bioethanol. This bioethanol is produced in Brazil by fermenting molasses, which is the residue from refining, in most cases, sugarcane juice. Being produced from molasses, it does not affect or compete with food (sugar) production.

Moreover, ethylene production is followed by the same process as for petroleum-derived PE.

Consequently, it can be easily molded by conventional polyethylene molding machines and molds.



Benefits ?

If entirely made from bio-PE, polyethylene moldings will be 96% biomass-derived.

This translates to an approximately 70% reduction of CO₂ (greenhouse gas) emissions compared with petroleum-derived PE.

Assessment of CO₂ emissions from processes encompassing bio-PE production in Brazil, transport to Japan, use as containers and disposal by incineration



Products ?

Items produced from bio-PE are virtually the same in color tone as those from conventional PE.

Regarding heat resistance, impact resistance (drop test) and workability (e.g. printing), bio-PE is similar to conventional PE. Bio-PE has proven itself in actual applications, with its odorless and chemical resistance properties suitable for general-use shampoos.

Please test the container's resistance to the contents without fail.



Material Codes ?

The material code for bio-PE is "PE."

If a product is made from 25% or more biomass-derived components, it is permitted to bear the BP logo of the Japan BioPlastics Association (JBPA). Bio-PE qualifies for the BP logo.

To use the BP logo, you need to register with JBPA as a member and have your products individually registered and certified (at cost).



Applicable Products ?

All GLASEL products made with PE can also be made with Bio-PE.

Some products are excluded. Please inquire for details.