



Recycled Polyester Fiber

ECOPET™

Facilitates harmony with the ecosystem respecting the values of nature and all living organisms

This is the fundamental concept of Teijin Group's environmental management.

To represent the concept in practical forms,

Teijin makes every effort to reduce environmental impact from its business operation by making effective use of resources and recycling its products.

One of the priorities is the deployment of ECOPET™, recycled polyester fiber made from used PET bottles.

The environmental impact reduction effect of ECOPET™ has been substantiated by an LCA study.

As a result of a study using the LCA methodology, ECOPET™ can reduce CO₂ emission by 47% and energy consumption by 33% as compared to having the fiber produced from oil.

The assessment includes CO₂ emitted by incinerating products that are not recycled.
Source: An estimate by Industry-Information Collaboration Research Center Corp.

What is LCA (life cycle assessment)?

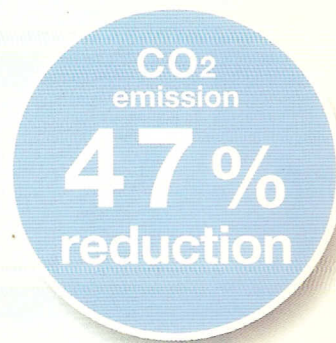
A methodology used to analyze and assess comprehensive environmental impact of a product throughout its life cycle (from extraction and procurement of resources to product disposal) by quantifying the resource consumption and emitted substances in each stage.

* Conversions are made based on the following assumptions.

(1) One 500ml PET bottle weighs 30 grams, amounting to a total weight of 9 kg

(2) One pine tree would absorb 14 kg of CO₂ in a year

(3) 1 liter of crude oil would produce 38.2 MJ of heat (thermal energy)



For example,*

When 300 PET bottles of 500ml capacity are recycled into staple fiber:

The 47% reduction in CO₂ emission is



equivalent to the amount of CO₂ absorbed annually by 2.33 pine trees.

The 33% reduction in energy consumption is



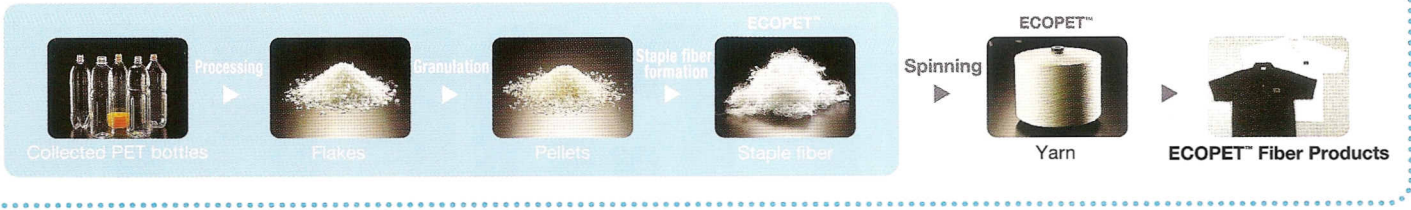
equivalent to saving 14.6 liters of crude oil.



ECOPET™

ECOPET™ is a polyester fiber made from collected used PET bottles through the "material recycle process". It enables the effective use of available resources without relying on fresh oil, effectively reducing adverse effect on the environment significantly. Since its first introduction in 1995, it has been used in a variety of applications.

Material Recycling Process



PET bottles are valuable resources.

In Japan, more than 70% of PET bottles are recycled. In today's circumstances, which calls for further efforts for preserving environment, PET bottles are regarded as valuable resources for realizing sound utilization of materials through recycling.

For example, When 300 PET bottles of 500ml capacity are:

- incinerated without recycling, **20.7kg of CO₂ would be generated.**
- recycled into T-shirts, **57 T-shirts would be produced.**

Assumes a bottle to weigh 30 grams

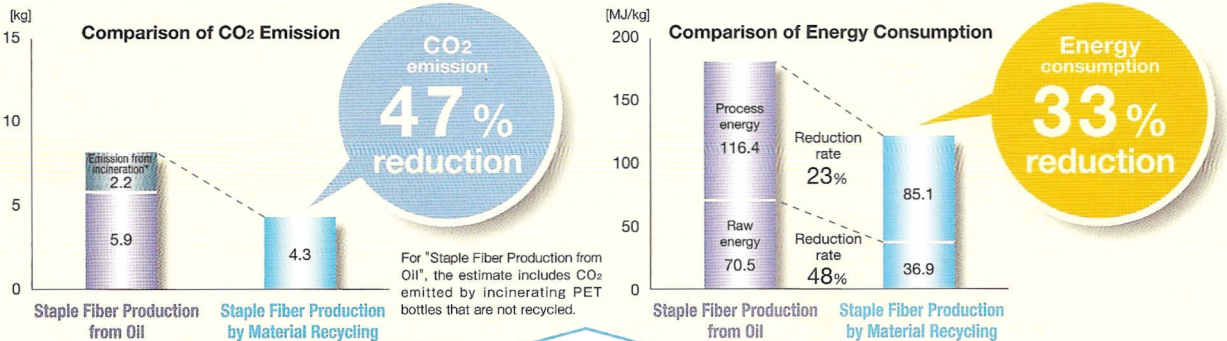
This is equivalent to CO₂ emitted by a person in three weeks!

The recycle is eco-friendly!

The ecological nature of ECOPE™ becomes evident by comparison!

The Environmental Impact Reduction Effect of ECOPE™

CO₂ emission and energy consumption are compared in two different processes as depicted below ("Staple Fiber Production from Oil" and "Staple Fiber Production by Material Recycle")



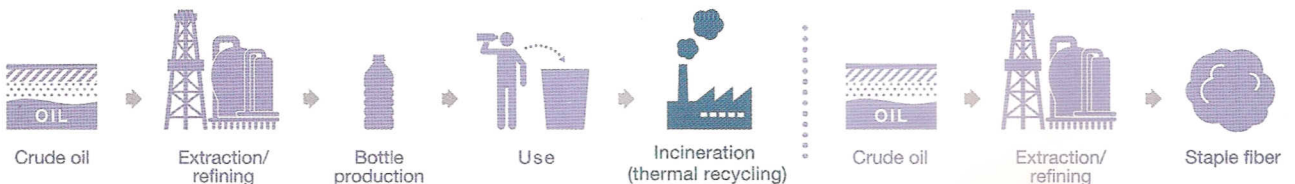
Staple Fiber Production by Material Recycling

When staple fiber is produced by recycling PET bottles



Staple Fiber Production from Oil

When staple fiber is produced anew from oil without recycling PET bottles



ECOPET™ offers an opportunity to appeal with the use of recycled materials to your customers, while facilitating the effective use of PET bottles.

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