



# A new life for plastic bottles

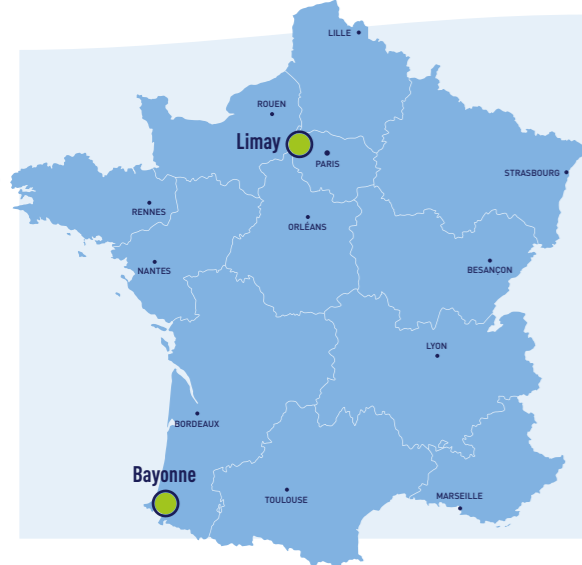
## Recycling PET plastic bottles



# An expert in recycling PET bottles

In the Nouvelle Aquitaine region, SUEZ has the only factory, in southern France (Grand Sud), processing PET (polyethylene terephthalate) bottles collected through the house hold waste sorting system.

In Limay, a town in the Yvelines department (Ile-de-France region), SUEZ invested several million euros in a second PET bottle recycling factory called France Plastiques Recyclage (FPR).



PET appeared in 1992 and replaced PVC in the manufacturing of water bottles at the end of the nineties. It is now used more and more for dairy products and detergents. **The bottles and caps are 100% recyclable**, which enables the production of quality recycled raw materials for industrial corporations committed to a sustainable development approach.

**As of now, 61% of PET bottles on the market are collected and recycled.** The next challenge will be to increase the collection in order to boost the recycling of this material.

With its annual capacity of **33,000 tonnes for the Bayonne site** and **50,000 tonnes for FPR**, **SUEZ recycles nearly 40% of the bottles collected in France**, making it one of the leaders of recycled PET (r-PET) on the French and European markets.

## THE + POINTS

### Belonging to a large group

SUEZ brings global solutions in terms of the management and recovery of all types of waste.

### Two complementary sites

One in the North, one in the South, along with a range of products in the form of pellets or granules to satisfy the needs of a majority of PET players.

### Traceability guarantee

From collection to marketing, SUEZ guarantees the traceability of the products throughout the process.

### A full-coverage network

SUEZ relies on a large collection and transport network to ensure extensive nationwide coverage. Various means of transport are available: road, waterways, and maritime.

## DID YOU KNOW?

When compared with one tonne of virgin material, the production of **one tonne of r-PET** consumes:

**3 times less energy**

**1,5 t eq. CO<sub>2</sub> less** or more than 8 round-trip flights between Paris and Marseille

Environmental and societal commitment

RecyClass



ISO 9001-2008 certification



# Purchasing only the best

The PET bales we receive come exclusively from the French market. **SUEZ RV Plastiques Atlantique** and **FPR** are **essential players in circular economy and environmental conservation**.

The teams at the SUEZ Bayonne site go above and beyond to meet the needs of each of the suppliers, for example by offering external storage solutions to handle the greater quantities of materials received during the summer.

The FPR site gives suppliers two transport options: roadways and waterways. 20% of the factory supplies are delivered via waterways.



## DID YOU KNOW?

A barge carries **220 tonnes of plastic**, the equivalent of 16 lorry loads.

## Quality check as soon as the bottles arrive to be recycled

As soon as the material is delivered, our operators perform a visual inspection of the bales. Then, they take about ten kilos out of each batch. In order to ensure the quality of the incoming material and its compliance with CITEO®, these samples are sent to the characterisation zone, where they are examined through detailed visual inspection and the use of an infrared sensor and weighing scale.



# Quality certified recycled products

Each recycled product sold by SUEZ undergoes **quality checks throughout the production chain**. We also check each big bag or tank containing pellets or granules and ensure traceability for each batch.

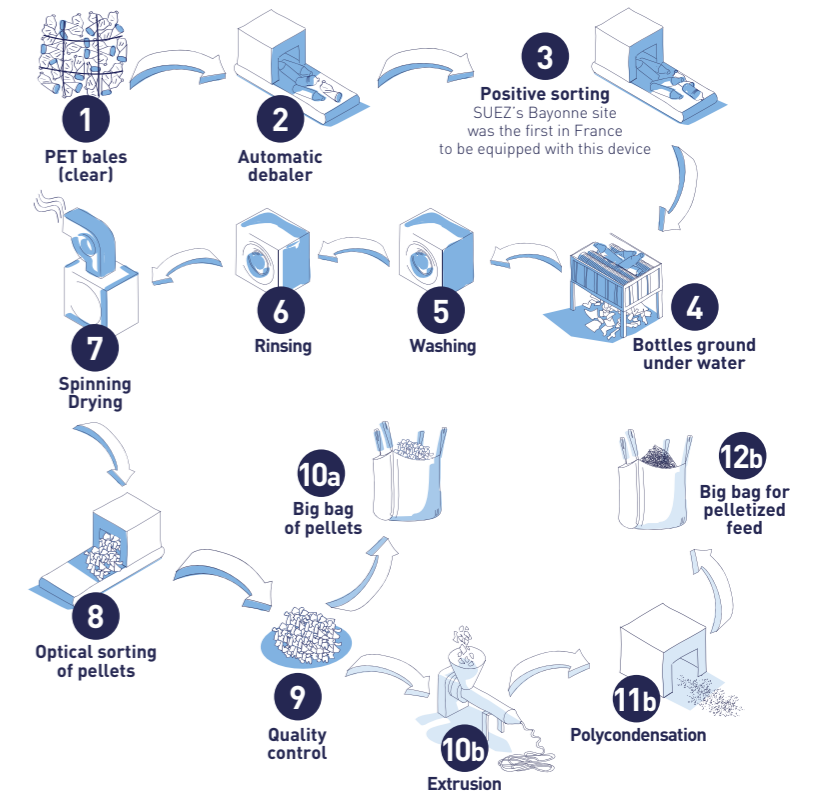
Though the volumes of PET bottles collected vary greatly depending on the season, SUEZ RV's **modular storage space** ensures a **steady production of recycled raw materials year-round**.

**Having a great variety of industrial tools** is essential in order to implement the entire **process** which will result in **extremely high-quality products**.

**Products are checked directly by the on-site laboratory at each factory** which can measure their **density, humidity and granulometry** and **analyse the level of impurities** in each batch.

**SUEZ markets its own reference products that can be used by industrial corporations:**

- clear PET pellets
- floral-coloured PET pellets
- shredded caps
- r-PET granules of equivalent food quality to virgin PET





## Industrial and technological uses

The reference products sold by SUEZ allow industrial corporations to manufacture new products, namely **in the food** including **ore carrier**, **textile** and **insulation products sectors**.

- r-PET bottles (bottle to bottle) injection - blow-moulding
- Fibres produced by melt spinning
- Thermoform plastic sheets
- Foam



### FIND OUT MORE...

The main technical characteristics of our recycled raw materials are detailed on our product sheets.

## International marketing

**SUEZ markets secondary raw materials obtained from PET recycling to industrial corporations in France and in Europe** that integrate them into their production process.

With **its logistics service dedicated to its clients**, SUEZ can **adapt to delivery requirements**.

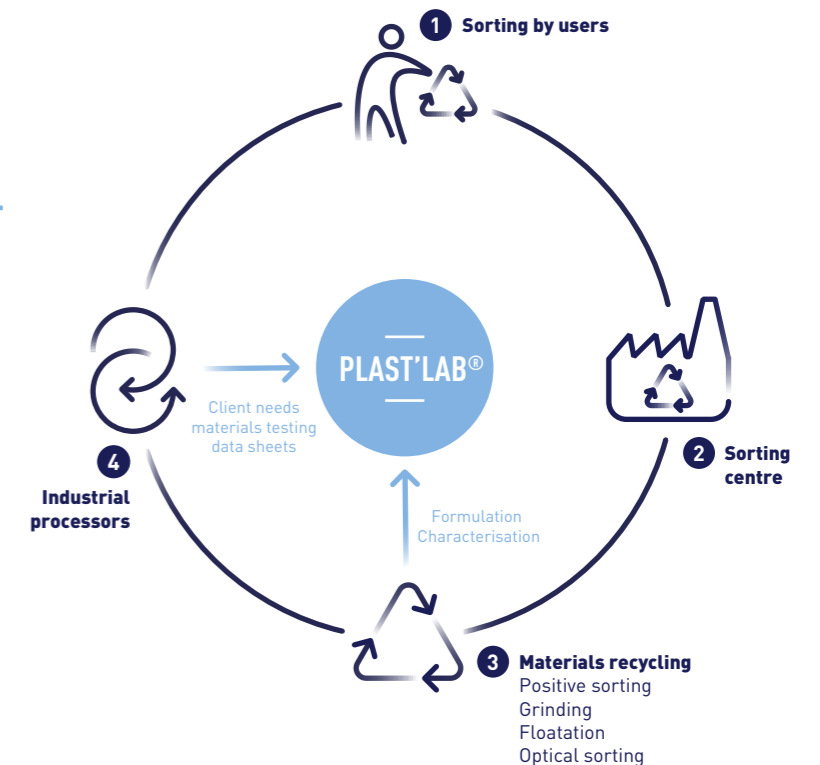
All transport is done by **carriers certified by SUEZ, free of charge**.

## SUEZ at the heart of your environmental issues

The SUEZ Research & Development support laboratory:  
**PLAST'LAB®**

**With state-of-the-art techniques for the characterisation of polymers and additives:**

- DSC (differential scanning calorimetry)
- FTIR (Fourier-transform infrared spectroscopy)
- TGA (thermogravimetric analysis)
- X-ray fluorescence...
- Various techniques to characterise mechanical properties
- Formulation laboratory...



### > STRENGTHENING TRUST

in recycled raw materials among converters



### > MAINTAINING DIALOGUE

with users of recycled raw materials



### > DEVELOPING

the recycled raw materials of tomorrow



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