

How



Are Made

Most plastics originate from oil, natural gas or coal.
In **SOUTH AFRICA** the gas comes from **COAL**.

1.

Sasol makes **ETHYLENE** and **PROPYLENE GAS** from the refining of **COAL** at the factory in Sasolburg.



2.

Two companies, Sasol Polymers and Safripol **POLYMERISE** these **GASES** into **POLYMERS** called **POLYETHYLENE** and **POLYPROPYLENE (PP)**



These polymers are now in a **POWDER FORM**.

Hosaf polymerise Polyethylene terephthalate (**PET**) from **IMPORTED CHEMICALS**.



3.

In the **GRANULATION PLANT** additives and fillers are **ADDED TO THE POWDER**.

This compound is granulated, bagged and ready to be sold to **CONVERTERS**.

Converters make the **GRANULES (NURDLES)** into different plastic products.



4.



SPECIALISED EQUIPMENT

melts, compresses and cools the plastic granules during the **FORMING** process, also called:

- blow moulding
- extrusion
- injection moulding
- rotational moulding and
- thermoforming

PLASTICS

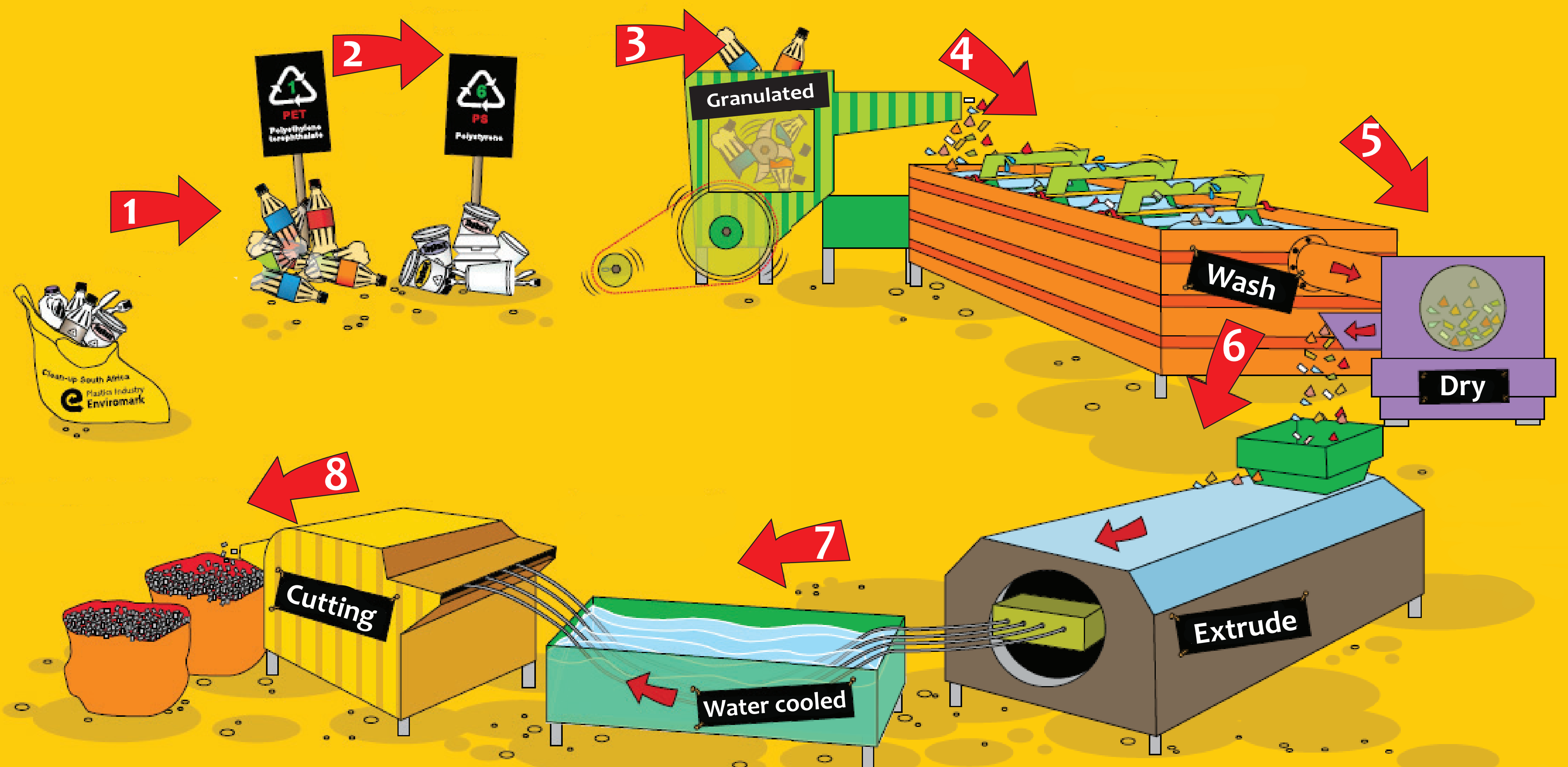
Recycling Sequence

1
COLLECTION
of plastics.

2
SORTING of
different
plastics.

3
The plastic items
are **CUT UP** into
smaller pieces
using a shredder
or granulator.

4
Granulated flakes are
put through a
WASH PLANT
to remove labels,
residual contents
and soil.



8
The pellets are
bagged to be sold
to a **CONVERTER**
who will use them to
produce new plastic
products.

7
The strings are
WATER COOLED
and chopped into
pellets by a
revolving cutter.

6
After drying, the granules are
fed into an **EXTRUDER**.
They are melted and
extruded through a
multi-hole die to make
continuous strings.