PLASTICS

Plastic is the general common term for a wide range of synthetic or semisynthetic organic solid materials suitable for the manufacture of industrial products.

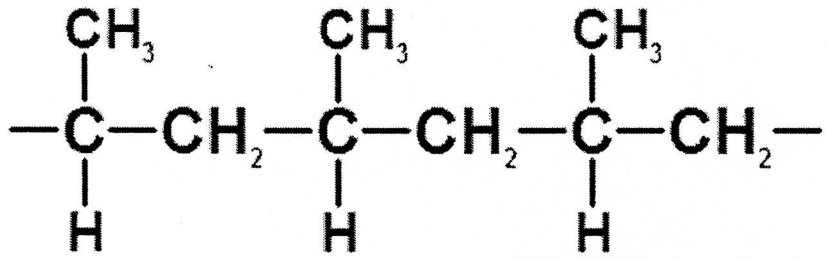
Plastics are typically polymers, and may contain other substances to improve performance or reduce costs.

A **monomer** (from Greek *mono* "one" and *meros* "part") is a small molecule that may become chemically bonded to other monomers to form a polymer

A **polymer** is a *large molecule* (macromolecule) composed of repeating structural units (monomer)

The word ***polymer*** is derived from the Greek words "*poly*", meaning "many"; and "*meros*", meaning "part".

Plastics are manufactured using a process known as POLYMERISATION



Polypropylene

Plastics can be **CLASSIFIED** based on qualities that are relevant for manufacturing or product design. Examples of such classes are the thermoplastic, thermoset, and elastomer.

- A **thermoplastic** is a plastic that melts to a liquid when heated and freezes to a brittle, very glassy state when cooled sufficiently
- **Thermosetting plastics** thermosets) are polymer materials that irreversibly cure form.
- An **elastomer** is a polymer with the property of elasticity

The **difference between** thermoplastic and thermosetting plastics is that *thermoplastics* become soft, remoldable and weldable when heat is added. *Thermosetting* plastics however can not be welded or remolded when heated, simply burning instead. On the other hand, once a thermosetting is cured it tends to be stronger than a thermoplastic.

Completar la tabla

ENGLISH	ESPAÑOL	
Degradable	Degradable	
Elastomer		
Fibre	Fibra	
Foam	Espuma	
Monomer		
Plastic		
Polyamide (PA)	Poliamida	
Polycarbonate (PC)	Policarbonato	
Polyester	Poliester	
Polyethylene (PE)	Polietileno	
Polymer		
Polymerisation		
Polypropylene (PP)	Polipropileno	
Polystyrene (PS)	Poliestireno	
Polyurethane (PU)	Poliuretano	
Polyvinyl Chloride (PVC)	Cloruro de polivinilo	
Raw Material	Materia Prima	
Recycle, to	Reciclar, Recuperar	
Resin	Resina	
Rigid	Rígido	
Thermoplastic		
Thermoset		

TEXTILES

Fiber *(American English)* or **fibre** *(International English)* is elongated stringy natural, man-made or manufactured material.

In the case of **natural fibers**, they often tie together the parts of natural creatures.

- Natural **vegetable fibers**, generally consist of cellulose, examples include cotton, linen, and hemp. Cellulose fibers are used in the manufacture of paper and cloth.
- Natural **animal fibers** include spider silk, hair, and wool.

Man-made fibres are those that are made artificially, but from from natural raw materials (often cellulosic). Examples include fiberglass, rayon, acetate, etc.

Synthetic fibers and man-made fibers are the result of an extensive search by scientists to increase and improve upon the supply of the naturally occurring animal and plant fiber. Examples include: nylon, acrylic, polyester and graphite fiber

A **textile** is a cloth made of fibers that have been bonded into a fabric.

The following is a partial list of the **materials that can be used to make textiles**.

ENGLISH	*ESPAÑOL*
Animal origin	
• Angora rabbit hair • Camel hair • Cashmere • Silk • Wool	
Vegetable	
• Cotton • Hemp • Jute • Linen,	
man-made fibers	
• Acrylic fiber • Spandex, tactel, lycra and other 'stretch' fabrics • Nylon fiber • Polyester fiber • Polypropylene	

Cloth or **fabric** is a flexible artificial material made up of a network of natural or artificial fibres formed by weaving or knitting (textiles), or pressed into felt