

# POLYMER-BASED PRODUCTS COUNTDOWN

10. What do pantyhose and parachutes have in common? They both contain polyamide as a base material. Polyamide is better known under its trade name: nylon. This polymer is also used to make ropes, swimwear and boat sails. Polyamide is not only strong and durable, but also moisture-resistant and has an ample temperature resistance. Nylon is a component of bottles, solvents and food packaging, as well.
9. Non-stick cookware and cooking utensils are made using polytetrafluoroethylene, or PTFE for short. PTFE is a waxy, thermally stable material that's tough, corrosion resistant and non-flammable. It can resist temperatures of up to 260°C, which makes it ideal not only in the production of cooking products, but also as a cable insulator and sealant. A porous form of PTFE is the base material of a highly breathable waterproof fabric used to make sports uniforms and exercise gear.
8. Liquid-absorbing crystals are polymers that can absorb several times their weight in water. Their most popular application is as filler for disposable diapers, but they're also used in humidors and first-aid packs, and as fire retardants and drink chillers. Liquid-absorbing crystals are particularly useful in gardening and landscaping. Because they retain water, they can reduce the need for watering by up to 80 percent.
7. Despite their different looks and feels, containers like foam cups, grocery store meat trays and disposable cutlery are all basically the same product. These items are all made from polystyrene, a plastic with limited flexibility that's also used to make DVD cases, disposable razors and refrigerator insulation. Polystyrene is one of the polymers that can be recycled in most of its forms.
6. Polyethylene terephthalate, or PET, is probably the best-known and most widely used polymer in existence. From soft drink bottles to milk containers, PET can be found in pretty much any container in your refrigerator. This material is the most recyclable of all plastics.
5. Spandex clothing fibre is made of polyurethane, a quick-drying, highly elastic polymer which is used in a number of clothing items, including sports uniforms, bathing suits, exercise clothing, leggings, skinny jeans, socks and wetsuits. Even bra straps and disposable diapers are made using spandex polymers.
4. Polyolefin is widely used in the construction industry. It is also used in the production of textiles, because it has a unique feature: it can be melted and turned into a fine fibre. Common items that contain polyolefin include mattress covers, lining fabrics and upholstery, insulated socks, disposable hospital garments, rope and nets, woven sacks and bags, and disposable diapers.
3. Polycarbonate is one of the most versatile polymers. It is used to make computer cases, CDs, automotive and aircraft components, toys and riot shields. Polycarbonate has been used to make high-quality eyeglass lenses which are lighter and thinner than glass, offer UV protection and are impact resistant. Polycarbonate is also used to make sports goggles, car headlights, projection screens, helmets and visors. Diffuser sheets for LCD flat screens are also made from polycarbonate.
2. Basically all hairdressing products contain polymers. For example, polymers are used in conditioners and they're also added to shampoos as a thickener.
1. Polyvinyl chloride, or PVC, is the material used to make plumbing fittings and pipes, but PVC is also used to make credit cards. The same PVC material is used to make leather-like materials for clothing and shoes, vinyl records, synthetic floor tiles and electric wire insulation and commercial signs and banners.

**1** 'Tidy up' these items mentioned in Polymer-based products countdown and put them into the right place(s) in the table below. *Tip: copy the table in your exercise book.*

automotive and aircraft components	bathing suits	boat sails	
bras	cable insulators	car headlights	CDs
computer cases	cookware	disposable cutlery	disposable diapers
disposable razors	DVD cases	electric wire insulation	
exercise gear and clothing	fire retardants	first-aid packs	
foam cups	food packaging	hairdressing products	helmets and visors
leggings	mattress covers	meat trays	milk containers
panty hose	parachutes	sealants	skinny jeans
socks	solvents	sports goggles	sports uniforms
swimwear	synthetic floor tiles	wetsuits	

KITCHEN	LIVING-ROOM STUDY	BEDROOM WARDROBE	BATHROOM	SPORT CENTRE / SPORT RESORT	CONSTRUCTION INDUSTRY

2

Choosing from phrases 1-10 below, find the 'happy ending' for phrases a-j to make a short summary of Polymer-based products countdown.

- a. Polyamide (nylon) is especially useful because .....
  - b. Nonstick cookware is made using PTFE because .....
  - c. Liquid-absorbing crystals are used in disposable diapers because .....
  - d. Most takeout containers are made from polystyrene because .....
  - e. PET is possibly the best-known polymer because .....
  - f. Polyurethane is used in many of clothing items because .....
  - g. Polyolefin is extensively used in the textile industry because .....
  - h. Many eyeglass lenses are made from polycarbonate because .....
  - i. Hairsprays contain polymers because .....
  - j. Among its many applications, PVC is used to make clothing and shoes because .....
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- 1. .... it can be liquefied and turned into a fine fiber.
  - 2. .... it can resist very high temperatures.
  - 3. .... it is a type of plastic with limited flexibility.
  - 4. .... it is quick-drying and highly elastic.
  - 5. .... it is the most widely used.
  - 6. .... it looks like real leather.
  - 7. .... it's light, thin and impact resistant.
  - 8. .... it's strong, durable, and resistant to moisture and temperature.
  - 9. .... they are what helps hold hair in place.
  - 10. .... they can absorb several times their weight in water.