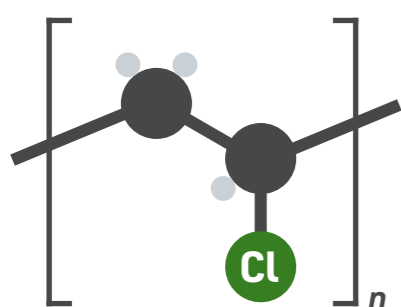


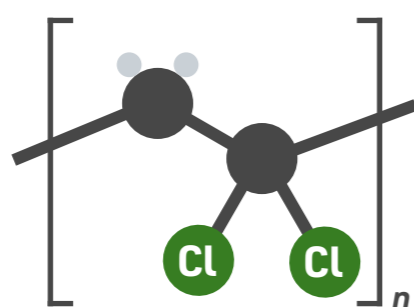
The plastic anatomy of a Barbie doll

Head and hair

Barbie doll heads are made from polyvinyl chloride (PVC), mixed with plasticiser to make it more flexible. The hair is commonly made from polyvinylidene dichloride (PVDC), but other polymers including nylon and polypropylene.



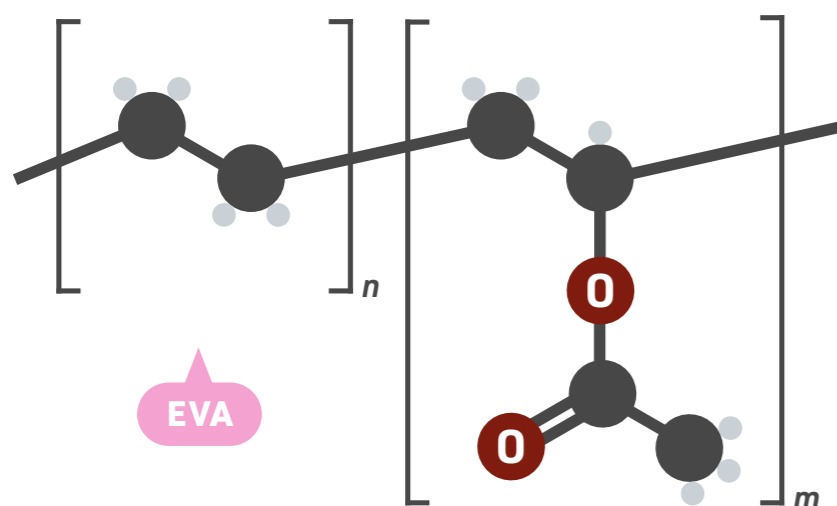
PVC



PVDC

Arms

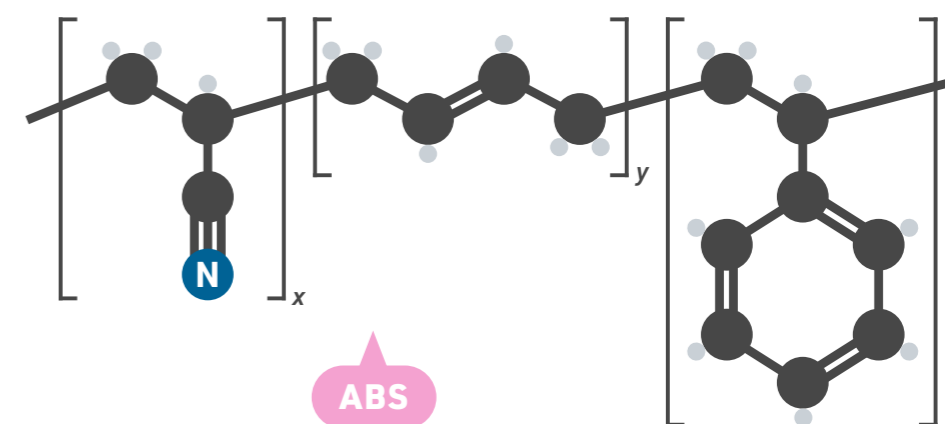
Historically, Barbie doll arms were made of PVC. Today, Barbie's arms are made of ethylene-vinyl acetate (EVA), a copolymer of ethylene and vinyl acetate which is soft and flexible.



EVA

Torso

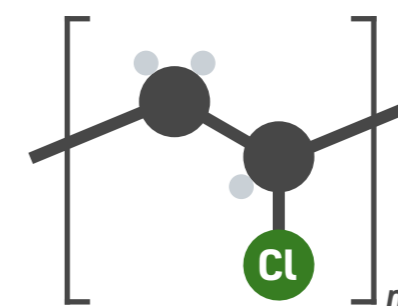
PVC was used for early Barbie doll torsos. Dolls from the mid-1960s to the mid-1970s used low density polyethylene (LDPE), while today's dolls use acrylonitrile butadiene styrene (ABS), the same plastic that Lego bricks are made of.



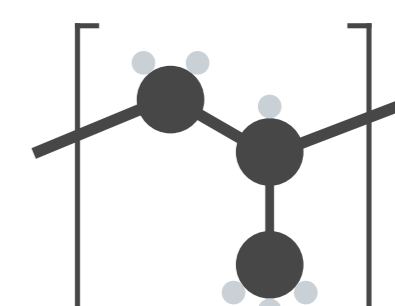
ABS

Legs

Much like the other parts of the doll, PVC was used for the legs of early dolls. It's still used today, though the phthalate plasticisers used in early dolls have been replaced by safer alternatives. The bend-leg armatures are made of polypropylene (PP).



PVC



PP

KEY: ● Carbon ● Oxygen ● Nitrogen ● Hydrogen