








Plastics Chooser Chart

Different plastics have different properties. Use the chooser chart below to help you choose which is the best plastic for your design.

Plastic	Acrylic	PVC	Nylon	Polystyrene	Plastic foams	Liquid resins	Formica
Name	polymethyl methacrylate	polyvinyl chloride	poluamide	polystyrene	expanded polystyrene, polyurethane foam, polyester foam	polyester resin, epoxy resin	melamine formaldehyde
Abbreviation	PMMA	PVC/UPVC	PA	PS		PR, ER	MF
Type	thermoplastic				modified plastic	thermoset	
Commercial uses	signs	electrical insulators, plumbing fittings	fabrics, combs, bearings	fridge door panels	packing, padding, insulation	boat hulls	work surfaces
Disposal	RU	RC	RC	RC			RU

Key: RC = commercially recyclable; RU = likely to be found in a form suitable for re-use in school.

Plastics Chooser Chart (cont'd)

Plastic	Acrylic	PVC	Nylon	Polystyrene	Foams	Liquid resins	Formica
Durability	●●●●	●●●●	●●●●●	●●●●●	●●	●●●●	●●●●●
Softening point/°C	85-115	70-80	230	80-105	N/A	N/A	N/A
Relative price/£	●●●	●●	●●	●●	●	●●●●	●●
Ease of sourcing	●●●●	●●●●	●●	●●●●	●●●	●●●	●●●●
Hardness (how difficult it is to scratch)	●●●●	●●	●●●	●●	●	●●●●●	●●●●●
Strength (how difficult it is to break)	●●●	●●●●	●●●●●	●●●●	●	▲	●●
Density (how heavy it is)	●●●	●●	●●●	●●	●	●●●●●	●●●●●
Modulus of elasticity (how difficult it is to stretch)	●●	●●●	●	●	▲▲	▲	●●●●●
School uses							
Ease of hard-working	○○○	○○○○	○○○	○○○○○	○○○○	○○	○○○
Ease of processing	○○○○○	○○○○○	○○○	○○○○○	○○○○	○○	○○○
Suitable processes	line bending	vacuum forming	turning component	vacuum forming	hot-wire cutting	casting, moulding	laminating

Key: ● = the more ●, the greater the property; ▲ = dependent on the reinforcing material; ▲▲ = polyester foam is very easy to stretch (value much less than ▲); ○ = the more ○, the easier the material is to use, N/A = not applicable.