

## Raw Materials for Manufacturing Plastic Products

COMMON NAME	SCIENTIFIC NAME	ABBREVIATION	PURPOSE	PRODUCTION PROCESS	COLOR	ADDITIONAL INFORMATION
ABS	Acrylonitrile-Butadiene-Styrene	ABS	Plated with metallics for metallic-finished buttons	Injection Mould	Light Gray or Ivory	Not suitable for dyeing. Do not use bleach or products containing acid. Washing machine temperature should be less than 40°C (104°F). Ironing temperature should be less than 120°C (248°F).
Acrylic	Polymethyl-Methacrylate	PMMA	Imitation Glass or Rhinestone	Injection Mould	Clear/Transparent	Not suitable for purple color. Non Heat-Resistant. May melt or change color under high temperatures. Washing machine temperature should be less than 40°C (104°F). Ironing temperature should be less than 120°C (248°F).
Nylon	Polyamide	PA	"Jack of all trades" Most versatile button material	Injection Mould	White/Dyeable	Great for dyeing. May melt or change color under high temperatures. Washing machine temperature should be less than 40°C (104°F). Ironing temperature should be less than 120°C (248°F).
Epoxy	Epoxy Resin	EP	Mixed media or custom buttons	Mixing Process	Mix with dyestuff for coloration	Non Heat-Resistant. Avoid high temperatures. Washing machine temperature should be less than 40°C (104°F). Ironing temperature should be less than 120°C (248°F).
Polyester	Unsaturated Polyester Resin	UP	Imitation Shell, Imitation Horn, or Imitation Stone buttons	Made by tool with turning machine	Transparent	Can be used with dyestuff to color match. Can use pearl dyestuff for imitation pearl finish. Can use white dyestuff for chalk finish.
PVC	Polyvinyl Chloride Straight Resin	PVC	Imitation Rubber buttons	Injection Mould	Mix with dyestuff for coloration	Non Heat-Resistant. Avoid high temperatures. Suitable for athletic wear.
Urea	Urea-Formaldehyde	UF	High-Quality Imitation Horn buttons	Press Mould	Mix with dyestuff for coloration	Not suitable for dyeing. Heat-Resistant. Resistant to all kinds of chemicals except strong acid and sodium. Will not change color after dry-cleaning. Washing machine temperature should be less than 60°C (140°F). Ironing temperature should be less than 160°C (320°F).