

Different types of polyurethane foam products use different raw materials, have distinct compositions and different properties

Type of Foam	FLEXIBLE Polyurethane Foam	RIGID Polyurethane Foam	SPRAY Polyurethane Foam
Applications	<p>Cushioning in</p> <ul style="list-style-type: none"> ▶ upholstered furniture ▶ mattresses ▶ carpet cushion ▶ automotive seating ▶ arm rests and headliners <p>Also, as</p> <ul style="list-style-type: none"> ▶ apparel padding ▶ shoe insoles ▶ filtration ▶ packaging ▶ sponges ▶ applicators ▶ medical and technical applications 	<p>Insulation in</p> <ul style="list-style-type: none"> ▶ refrigerator walls ▶ building insulation panels <p>Also found in:</p> <ul style="list-style-type: none"> ▶ decorative and architectural applications <ul style="list-style-type: none"> ▪ molded picture frames ▪ furniture trim and molding ▪ exterior building shutters ▪ detailing created by molding rather than intricate carving ▶ flotation modules for docks 	<p>A wide variety of applications including but not limited to:</p> <ul style="list-style-type: none"> ▶ roofing ▶ air barriers ▶ insulation (open cell, closed cell) ▶ spray-in-place packaging ▶ flotation for boats
Method of application	Cut from blocks or molded	Mainly injected, molded or poured as blocks	Spray-applied — installed as a liquid and then expands many times its original size
Cell structure	Open cell (>90% open cells); lightly cross-linked (Porous)	Closed cell (> 90% closed cells); highly cross-linked (Ranges from semi-porous to non-porous)	Closed cell (> 90% closed cells); highly cross-linked Open cell (predominately >50% open cell); unlike FPF, does not recover when compressed (Ranges from semi-porous to non-porous)
Compression	Recovers when compressed	Does not recover when compressed	Does not recover when compressed
Density	Low-Medium Density 0.62-4.99 lb/ft ³	Medium-High Density 2.0-25 lb/ft ³ *25 is for wood-like pictures and carvings	Low-Medium Density 0.5-3.5 lb/ft ³
Feel	From Soft to Supportive	Hard	Medium Hard (closed cell); softer (open cell)
CAS Number	None	May apply to certain components	May apply to certain components
Resources	Polyurethane Foam Association, pfa.org (for flexible polyurethane foam only)	American Chemistry Council/Center for the Polyurethanes Industry, americanchemistry.com/polyurethanes	Spray Polyurethane Foam Alliance, sprayfoam.org (for spray foam only)