

Grades for Extrusion

Metals

Material	Other names	Description	Applications	Corrosion resistance	Post treatment capability	Welding capability	Price index	Density - g/cm3	Young modulus - Gpa	Yield strength - Mpa	Ultimate tensile strength - Mpa	Elongation at break - %	Hardness - HB brinell	Electrical Conductivity - % at 20 °C IACS	Electrical resistivity - Ω·mm2/m	Thermal conductivity - W/m-K
6061	AlMg1SiCu, 3.3214, H20, A96061	It is the most popular aluminum alloy containing magnesium and silicon. The alloy is appreciated because of its versatile performance and all-around mechanical properties. Its shows excellent machinability and natural corrosion resistance.	Yachts, boats, and aircraft structures Structural components Pipe fittings Wheels and various transportation end uses Automotive components	Very good	Suitable for anodizing	Good	2	2.71	69	270 - 275	310	10 - 12	95	43	0,04	170
6063	AlMg0.7Si, H9, A96063	This alloy has medium strength alloy commonly known as an architectural alloy. It has a high corrosion resistance, suitable for welding and can be easily anodised. It features medium mechanical properties (lowest tensile strength among the 6000-series1) with good surface finish.	Window frames Door frames Roofs Sign frames	Very good	Suitable for anodizing	Good	2	2.71	69	195 - 210	230 - 240	8 - 11	73	53	0,032	200

Plastics

Material	Other names	Description	Limitations	Applications	Price index	Natural color	Color match	Density - g/cm3	Water absorption ASTM D570 - %	Hardness ASTM D2240 - Shore D	IZOD impact (Notched) ASTM D256 - J/m	Yield tensile strength ASTM D638 - Mpa	Elongation at break ASTM D638 - %	Flexural strength ASTM D790 - Mpa	Flexural modulus ASTM D790 - Mpa	Heat deflection temperature at 66 psi ASTM D648 - °C/°F	Glass transition temperature - °C/°F	Inflammability - UL94
ABS	Acrylonitrile Butadiene Styrene	Acrylonitrile Butadiene Styrene is affordable, light weight, strong, rigid, resilient thermoplastic material plastic. It offers impressive impact resistance, stiffness, and strength. It also boasts good dimensional stability and low water absorption. Additionally, it is easy to paint and electroplate.	Poor solvent solvents. Moderate resistance to heat, fatigue and UV light. Contains styrene	Construction Plumbing Marine Furniture industries	1	Beige	Good	1,05	0.3 - 0.8	100	200 - 215	27.6 - 55.2	10 - 50	66,7	2100 - 2800	98°C / 208°F	105 °C / 221°F	HB
PMMA	Acrylic, Plexiglas	Acrylic is often used as a glass substitute as it offers excellent optical clarity and high impact resistance. Additionally, it offers high resistance to scratch and is UV and weather-resistant. Moreover, it provides good dimensional stability and low water absorption, and it is easy to paint and electroplate.	Poor resistance to impact, wear and abrasion Easy to crack under load Limited heat and chemical resistance	Lighting diffusers, refractors and lenses Display shelves, racks and trims Vehicle trims Menu holders	2	Transparent	Good	1,19	0.1 - 0.4	90 - 99	20 - 22	70	2 - 10	100	2900 - 3100	105 °C / 220°F	116°C / 240°F	HB
PP	-	Polypropylene stands out as one of the lightest thermoplastics obtainable, offering outstanding flexibility as well as chemical resistance (most alkaline and acidic substances) at low cost. Moreover, it demonstrates low moisture absorption and non-toxic properties.	Impossible to bond and paint Low resistance to UV Burning very quickly	Oil pump tubes Protective plant and tree sleeves Polypropylene parts for toys Handles and shafts Food grade tubing and sample tubes	1	White	Good	0,9	0.01 - 0.1	70 - 83	60 - 70	23 - 33	200 - 500	31 - 40	1300 - 1800	50 - 100 °C 122 - 212 °F	25°C / 77°F	HB
Rigid PVC	-	Vinyl chloride provides a good balance of stiffness, impact resistance, UV stability, and inherent UL flame performance. Rigid PVC is chemically resistant to acids, salts, bases, fats, alcohols, and many solvents.	Poor resistance to cold and high temperature Poor creep resistance	Window and door frames Plumbing and fittings Irrigation elements Refrigeration component Protective bumpers	1	White	Good	1,4	0.04 - 0.4	80-90	20 - 40	47 - 62	25 - 80	72 - 91	2700 - 3000	70°C / 158°F	80°C / 176°F	V0
Flexible PVC	-	Flexible PVC is made with the addition of plasticizers which allows for a softer material. It offers good weather resistant, tear strength and kink resistance at low cost.	Stiffness and brittleness over time Stiffen in cold temperatures.	Tubes and hoses Gaskets and seals Bumpers Cable insulation Water stops Sleeves	1	White	Good	1,4	0.04 - 0.4	70 (shore A*)	-	10	400	-	-	70°C / 158°F	80°C / 176°F	V0