

Plastic Product Requirements

Surface, Weather Resistance, and Flame Retardancy

Requirement	Description	Common Standards / References
Surface Appearance	Smooth, free of bubbles, cracks, or sharp edges to ensure good aesthetics and safe handling.	ISO 11469, ISO 2409
Color Stability	Consistent color without noticeable fading or yellowing during usage and sunlight exposure.	ISO 4892, ASTM G154
Scratch Resistance	Resists minor scratches to maintain appearance and functionality over time.	ASTM D3363, ISO 1518
UV Resistance	Resists degradation from UV light, preventing brittleness or discoloration outdoors.	ISO 4892, ASTM G155
Weather Resistance	Withstands rain, humidity, and temperature changes without cracking or losing strength.	ISO 4892, ASTM D4329
Chemical Resistance	Tolerates common chemicals (cleaners, oils, etc.) without damage or deformation.	ISO 175, ASTM D543
Flame Retardancy	Meets standard flammability ratings (e.g., UL 94), slowing or preventing fire spread.	UL 94, IEC 60695
Low Smoke & Toxicity	Produces minimal smoke and harmful gases when burning, reducing risks indoors.	ISO 5659, EN 45545, ASTM E662