

Technical Data Sheet

— PMMA (Polymethyl Methacrylate)

1. General Information

Item	Specification
Product Name	PMMA
Chemical Name	Polymethyl Methacrylate
Grade Type	Optical Grade / Transparent Pellet
CAS Number	9011-14-7
Appearance	Colorless & Transparent Solid Pellet
Molecular Formula	$(C_5H_8O_2)_n$
Production Batch	



2. Properties

Item		Specification					
Grade		ZH-301	ZH-01	ZD-01	ZF-02	ZH6-01	ZH5-01
Appearance		Colorless transparent solid granules					
Particles per 3g		150±15	150±15	150±15	150±15	150±15	150±15
Impurities (pcs/550g)	≥0.3mm² 0.13 ~	0	0	0	0	0	0
	0.3 mm² 0.03 ~	1	1	1	1	0	0
	0.13mm²	10	10	10	10	0	0
	小 0.01 ~	10	10	10	10	5	5
	0.03mm² <0.01	500	500	500	500	200	150
Melt Flow Index (230°C, 37.3N), g/10min		2.0±0.3	2.0±0.3	6.0±1.5	14.0±2.0	1.7±0.4	5.5±1.5
Heat Deflection Temperature (1.8MPa), °C		100±2	100±2	87±2	84±2	94±2	100±2
Vicat Softening Temperature, °C		107±2	107±2	94±2	90±2	100±2	100±2
Haze (4mm), % ≤		0.4	0.4	0.4	0.4	0.4	0.4
Light Transmittance (4mm), %		93±1	93±1	93±1	93±1	93±1	93±1
Density, g/cm³		1.19±0.01	1.19±0.01	1.19±0.01	1.19±0.01	1.19±0.01	1.19±0.01
Water Absorption (24hr), % ≤		0.4	0.4	0.4	0.4	0.4	0.4
Tensile Strength (1A/5), MPa		77±10	77±10	71±10	66±10	75±10	61±10
Charpy Impact Strength (Notched, LeA V), kJ/m² ≥		1.2	1.2	1.2	1.1	1.2	1.19±0.01
Rockwell Hardness (M scale) ≥		95	95	88	84	95	95
Main Applications		Automotive light covers, instrument panel optical lenses	Automotive light covers, instrument panel optical lenses	Nameplates for various electrical appliances	Heat-resistant kinesthetic products	Impact-resistant material applications	Nail (cosmetic) applications

3. Processing Recommendation

- **Drying Condition:** 70~75°C for 3~4 hours, moisture content $\leq 0.1\%$
- **Barrel Temperature:** 200~230°C (210~220°C recommended for optical parts)
- **Mold Temperature:** 40~70°C
- **Shrinkage Rate:** 0.6~0.8%

4. Applications

- Optical lenses, light guides and display transparent components
- Automotive lamps, light covers and exterior transparent parts
- High-transparency optical sheets and functional films
- Electronic insulation materials and dielectric layers
- Architectural daylighting covers and transparent decorative components

5. Storage & Handling

- Store in sealed packaging under cool and dry environment (10~30°C)
- Keep away from direct sunlight, high temperature and heat sources
- Avoid contact with strong organic solvents
- Keep sealed to prevent moisture absorption

6. Disclaimer

All data shown in this TDS represents typical testing values of PMMA ZH6-01 under standard laboratory conditions. The information is believed to be reliable for reference only, without explicit or implicit guarantee for specific application effects. Customers shall verify the applicability independently before mass production. The manufacturer shall not be liable for any accidental or consequential losses caused by improper processing conditions.