



TSC-5M TSC(M) Series

High Transparency Engineering Plastics



Applications:

Premium CD Jewel Boxes, Cosmetics Packaging,
Lampshade, Faucet Handles, Pen/Pencil,
Water Pitchers etc.

Main Characteristics

- ~ High Gloss and Transparency
- ~ Can Replace Acrylic due to its higher Tenacity
- ~ 10% Lower Specific Gravity Than Acrylic
- ~ 10% - 20% Cheaper Than Acrylic

Other Merits

- ~ Smooth Surface
- ~ No Finger Print Left After Touching
- ~ No Need To Bake Before Process
- ~ Can Be Used With Recycled GPPS / HIPS
- ~ Short Molding Cycle

Properties	ASTM Test	English		S.I.	
		Value	Units	Value	Units
Physical					
Melt Flow Rate	D 1238	4	g/10min	4	g/10min
Specific Gravity	D 792	1.06		1.06	
Shrinkage	D 955	0.002-0.006	in/in	0.002-0.006	cm/cm
Optical					
Transparency (3.18mm)	D 1003	92	%	92	%
Haze index	D 1003	0.8	%	0.8	%
Mechanical					
Yield Tensile Strength	D 638	7252	psi	50	Mpa
Elongation	D 638	10	%	10	%
Flexural strength	D 790	11023	psi	76	Mpa
Flexural flexibility	D 790	355633	psi	2452	Mpa
Izod impact (20°C)	D 256	0.64	ft-lb/in	3.50	kg-cm/cm
Rigidity	Shore D	80		80	

Thermal

Softening Point	D 1525	210.2	°F	99	°C
Deflection Temperature Under Load	D 648	186.8	°F	86	°C

(The above data is for reference only)

Injection Molding Processing Guide	Starting Point	Range
Melting Temperature	215 °C	210 - 245 °C
Rear heating zone	190 °C	180 - 215 °C
Middle heating zone	205 °C	200 - 235 °C
Front heating zone	215 °C	210 - 245 °C
Mold Temperature	54 °C	32 - 60 °C

Recommended Highest Processing Temperature 250 °C

For melting temperature higher than 204°C and staying the heating zones for a long time, this will alter the material's colour to yellow and lower its transparency.

Injection Speed	Slow to Medium
Back Pressure	around 50 psi (345kPa)
Screw speed	around 60 rpm
Cushion	around 3 mm

Remark: It is necessary to clean the machine with GPPS prior to TSC-M processing (Especially after transparent ABS, HIPS & SAN being used.) to ensure there is no residue inside the machine to affect the transparency.