# Plexiglas® Optical POQ62

### Polymethyl Methacrylate Acrylic

#### **Evonik Industries AG**

### Message:

**Product Profile:** 

PLEXIGLAS® Optical POQ62 is an amorphous thermoplastic molding compound based on polymethylmethacrylate (PMMA).

In addition to the familiar properties of PLEXIGLAS® molding compounds, such as

excellent light transmission and brilliance,

very good weather resistance,

high mechanical strength, surface hardness and mar resistance,

PLEXIGLAS® Optical POQ62 is distinguished by its

guaranteed purity and clarity,

outstanding flow properties due to its low melt viscosity and its

extremely accurate mold surface reproduction.

Application:

PLEXIGLAS @ Optical POQ62 is particularly suitable for injection-compression molding and for injection-molding thin-walled parts with long flow paths.

Further fields of application are two-component injection molding and special extrusion.

Examples:

General Information

Manufacture of moldings with microstructured surfaces and optical structures.

UL YellowCard	E65495-100986376		
Features	Good Flow		
	Good Weather Resistance		
	High Clarity		
	High Hardness		
	High Strength		
	Light Stabilized		
Uses	Optical Applications		
Forms	Pellets		
Processing Method	Extrusion		
	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Density	1.19	g/cm³	ISO 1183
Melt Volume-Flow Rate (MVR) (230°C/3.8			
kg)	21.0	cm³/10min	ISO 1133
Water Absorption (Equilibrium, 23°C, 50%			
RH)	0.60	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	3300	MPa	ISO 527-2/1
Tensile Stress (Break)	63.0	MPa	ISO 527-2/5
Tensile Strain (Break)	2.8	%	ISO 527-2/5
Impact	Nominal Value	Unit	Test Method

Charpy Unnotched Impact Strength (23°C)	20	kJ/m²	ISO 179/1eU
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	97.0	°C	ISO 306/B50
CLTE - Flow (0 to 50°C)	8.0E-5	cm/cm/°C	ISO 11359-2
Flammability	Nominal Value		Test Method
Fire Rating	B2		DIN 4102
Optical	Nominal Value	Unit	Test Method
Refractive Index	1.490		ISO 489
Transmittance <sup>1</sup>	92.0	%	ISO 13468-2
Haze	< 0.50	%	ASTM D1003
Injection	Nominal Value	Unit	
Drying Temperature	< 80.0	°C	
Drying Time	2.0 to 3.0	hr	
Processing (Melt) Temp	220 to 260	°C	
Mold Temperature	60.0 to 90.0	°C	
NOTE			
1.	D65		

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## Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533 Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

