



TRANSPARENT NYLON SERIES OVERVIEW

PRODUCT	CHARACTERISTICS												APPLICATIONS	COMMENTS
	HIGH HDT	STIFFNESS / TOUGHNESS	IMPACT STRENGTH	DYNAMIC STRENGTH	CHEMICAL RESISTANCE	ESCR	WEATHER-ABILITY	LOW WARPAGE	FDA	USP VI	ISO 10993	NSF		
TR 55	X	X					X	X	X	X	X	X	Electrical Connectors, Housings, IR Sensors, Oil/Fuel Separators, Brackets, Sight Glass, Flow Meters, Displays, Baby Bottles, Drinking Bottles	High heat deflection temperature, good stiffness & toughness for transparent & non-warping applications
TR 55 LX				X	X					X	X	X	Eyewear Frames, Phone Housings, Telecom Connectors, Petrol Filters, Interior Automotive Housings, Handles, Medical Devices	For thin walled, transparent applications
TR 55 LY				X	X						X	X	Eyewear Frames, Telecom Connectors, Petrol Filters	Injection molded parts with high demands on toughness & resistance to stress cracking
TR 55 LZ				X	X						X	X	Safety Glasses, Automotive Systems, Electrical Equipment, Housewares, Medical Devices, Sanitary, Water & Gas Supply, Sports & Leisure, Tools	For applications with the highest requirements on toughness & resistance to chemicals
TR 90	X		X			X	X	X	X	X	X	X	Lighting, Connectors, Mobile Phones, Medical Devices, Sanitary, Water & Gas Supply, Sports & Leisure, Tools, Optical Lenses	Ductile breaking behavior, dynamic loading & good weathering stability
TR 90 UV	X		X			X	X						Lighting, Connectors, Mobile Phones, Medical Devices, Sanitary, Water & Gas Supply, Sports & Leisure, Tools, Optical Lenses	For outdoor applications with outstanding weathering stability; improved UV package
TR 90 NZ				X	X	X							Spectacle Frames, Housewares, Medical Devices, Connectors, Energy Distribution, Mobile Phones	Excellent for applications requiring very high impact strength
TR 90 LXS				X	X			X		X			Spectacle Frames, Safety Glasses, Housewares, Medical Devices, Connectors, Energy Distribution, Mobile Phones	For thin walled, transparent applications requiring very good resistance to stress cracking
TRV-4X9	X	X				X	X				X	X	Heating Systems, Housewares, Hydraulics & Pneumatics, Automotive Powertrain & Chassis	Dimensionally stable & low warpage design components with elevated strength
TRVX-50X9	X	X				X	X						Heating Systems, Housewares, Hydraulics & Pneumatics, Automotive Powertrain & Chassis	Glass filled, dimensionally stable & low warpage design components with elevated strength
TRV-55X9	X	X				X	X						Heating Systems, Housewares, Hydraulics & Pneumatics, Automotive Powertrain & Chassis	Glass filled, dimensionally stable & low warpage design components with elevated strength
TR FR 11292 (TR HT200)	X	X	X	X	X			X	X	X			Medical Devices, Kitchen Appliances, Sanitary Equipment, Engineering Components, Electronics	Resistant to heat/hydrolysis, ESCR, transparent, high surface hardness

Masterbatch Additives & Products

NAME	BASIS	HEAT STABILITY	UV STABILITY	UV BLOCKER	MOLD RELEASE	COLOR NEUTRALIZER	FDA CONFORM	EU FOOD SUITABLE	OPTICAL BRIGHTENER	BK MB	DOSAGE (%)
MB 6960 LS NAT	TR 55				X		X	X			3 - 5
MB TR55 Blue 4545	TR 55					X		X			2 - 5
MB TR55 Violet 4516	TR 55					X	X	X			1 - 5
MB XE 4140	TR 30				X			X			3 - 5
MB XE 4141	TR 30	X	X								3 - 5
MB XE 4066 / Blue 4548	TR 30					X					2 - 4
MB 5032 LS NAT	TR 90				X		X	X			3 - 5
MB TR90 Blue 4545	TR 90					X		X			1.5 - 2.5
MB TR90 Violet 4516	TR 90					X	X	X			1.5 - 2.5
MB XE3805 UV400	XE 3805			X							3 - 5
MB XE 3757 Violet 4506	TR 90				X	X					3 - 5
MB XE 3680	PA 12	X	X								3 - 5
MB XE 3855 NAT	PA 12				X						2 - 5
MB L20 BK N115/25	PA 12									X	1 - 2
MB 9485 LC	PA 12									X	1 - 2

PROPERTY	UNITS	TR55	TR90	PC	PMMA
Tensile Modulus (ISO 527)	Mpa	2200	1600	2300	3200
Notched Charpy (ISO 179/1eA)	kJ/m²	8	13	No Break	2
Tg (ISO 11357)	Celsius	160	155	148	110
HDT - 0.45MPa (ISO 75)	Celsius	145	135	137	95
Transparency 2mm (ASTM D1003)	%	93	94	90	94
Density (ISO 1183)	g/cm³	1.06	1	1.2	1.19
Fatigue Strength (DIN 53442)	Mpa	25	32	20	15
UV Stability	rel.	++	+++	+	++
Chemical Resistance	rel.	+++	++	+	+

NOMENCLATURE / GRADE DESIGNATION

LX = Tough, ESCR Grade
LY = Impact Resistant, ESCR Grade
LZ = Extreme Impact, ESCR Grade
LS = Improved Flow
UV = Weathering Resistant
NZ = Highest Impact
TRV = Reinforced Grades