

Materials Simulating Standard Plastics

RIGUR RGD450

PROPERTY	ASTM	UNITS	METRIC	UNITS	IMPERIAL
Tensile strength	D-638-03	MPa	40-45	psi	5800-6500
Elongation at break	D-638-05	%	20-35	%	20-35
Modulus of elasticity	D-638-04	MPa	1700-2100	psi	246,000 – 305,000
Flexural Strength	D-790-03	MPa	52-59	psi	7500 - 8500
Flexural Modulus	D-790-04	MPa	1500-1700	psi	217,000 – 246,000
HDT, °C @ 0.45MPa	D-648-06	°C	49-54	°F	120-129
HDT, °C @ 1.82MPa	D-648-07	°C	45-50	°F	113-122
Izod Notched Impact	D-256-06	J/m	30-35	ft lb/inch	0.561-0.656
Tg	DMA, E»	°C	48-52	°F	118-126
Shore Hardness (D)	Scale D	Scale D	80-84	Scale D	80-84
Rockwell Hardness	Scale M	Scale M	58-62	Scale M	58-62
Polymerized density	ASTM D792	g/cm3	1.20-1.21	-	-
Ash content	USP28 I	%	0.3-0.4	%	0.3-0.4

VEROCLEAR RGD810

PROPERTY	ASTM	UNITS	METRIC	UNITS	IMPERIAL
Tensile strength	D-638-03	MPa	50-65	psi	7250-9450
Elongation at break	D-638-05	%	10-25	%	10-25
Modulus of elasticity	D-638-04	MPa	2000-3000	psi	290,000-435,000
Flexural Strength	D-790-03	MPa	75-110	psi	11000-16000
Flexural Modulus	D-790-04	MPa	2200-3200	psi	320,000-465,000
HDT, °C @ 0.45MPa	D-648-06	°C	45-50	°F	113-122
HDT, °C @ 1.82MPa	D-648-07	°C	45-50	°F	113-122
Izod Notched Impact	D-256-06	J/m	20-30	ft lb/inch	0.375-0.562
Water Absorption	D-570-98 24hr	%	1.1-1.5	%	1.1-1.5
Tg	DMA, E»	°C	52-54	°F	126-129
Shore Hardness (D)	Scale D	Scale D	83-86	Scale D	83-86
Rockwell Hardness	Scale M	Scale M	73-76	Scale M	73-76
Polymerized density	ASTM D792	g/cm3	1.18-1.19	-	-
Ash content	USP28 I	%	0.02-0.06	%	0.02-0.06

TANGOBLACKPLUS FLX980

PROPERTY	ASTM	UNITS	METRIC	UNITS	IMPERIAL
Tensile strength	D-412	MPa	0.8-1.5	psi	115-220
Elongation at break	D-412	%	170-220	%	170-220
Compressive set	D-395	%	4-5	%	4-5
Shore Hardness (A)	D-2240	Scale A	26-28	Scale A	26-28
Tensile Tear resistance	D-624	Kg/cm	2-4	Lb/in	18-22
Polymerized density	ASTM D792	g/cm3	1.12-1.13	-	-

Transparent Materials

PRIMARY MATERIAL: **VEROCLEAR™ RGD810**

SECONDARY MATERIAL: **TANGOBLACKPLUS FLX980**

PROPERTY	ASTM	UNITS	RGD8705-DM RGD8710-DM RGD8715-DM RGD8720-DM	RGD8725-DM
Tensile strength	D-638-03	MPa	40-60	35-45
Elongation at break	D-638-05	%	15-25	20-30
Modulus of elasticity	D-638-04	MPa	1,700-2,300	1,400-2,000
Flexural strength	D-790-03	MPa	55-75	45-60
Flexural modulus	D-790-04	MPa	1,500-2,500	1,400-1,800
HDT, °C @ 0.45MPa	D-648-06	°C	40-45	40-43
Izod notched impact	D-256-06	J/m	22-35	25-35
Shore hardness (D)	D2240-05	Scale D	81.1-85.5	79.5-83.5

Rubber-like Materials

PRIMARY MATERIAL: **TANGOBLACKPLUS FLX980**

SECONDARY MATERIAL: **VEROCLEAR RGD810**

PROPERTY	ASTM	UNITS	FLX9040-DM	FLX9050-DM	FLX9060-DM	FLX9070-DM	FLX9085-DM	FLX9095-DM
Tensile strength	D-412	MPa	1.3-1.8	1.9-3.0	2.5-4.0	3.5-5.0	5.0-7.0	8.5-10.0
Elongation at break	D-412	%	110-130	95-110	75-85	65-80	55-65	35-45
Shore hardness (A)	D-2240	Scale A	35-40	45-50	57-63	68-72	80-85	92-95
Tensile tear resistance	D-624	Kg/cm	5.5-7.5	7.5-9.5	11-13	15.5-17.5	23-25	41-44

PRIMARY MATERIAL: **TANGOBLACKPLUS FLX980**

SECONDARY MATERIAL: **RIGUR**

PROPERTY	ASTM	UNIT	FLX4840-DM	FLX4850-DM	FLX4860-DM	FLX4870-DM	FLX4885-DM	FLX4895-DM
Tensile strength	D-412	MPa	1.3-1.8	1.9-3.0	2.5-4.0	3.5-5.0	5.0-7.0	8.5-10.0
Elongation at break	D-412	%	110-130	95-110	75-85	65-80	55-65	35-45
Shore hardness (A)	D-2240	Scale A	35-40	45-50	57-63	68-72	80-85	92-95
Tensile tear resistance	D-624	Kg/cm	5.5-7.5	7.5-9.5	11-13	15.5-17.5	23-25	41-44

Simulated Polypropylene Materials

PRIMARY MATERIAL: **VEROCLEAR RGD810**

SECONDARY MATERIAL: **TANGOBLACKPLUS FLX980**

PROPERTY	ASTM	UNITS	RGD8730-DM
Tensile strength	D-638-03	MPa	29-38
Elongation at break	D-638-05	%	25-35
Modulus of elasticity	D-638-04	MPa	1100-1700
Flexural strength	D-790-03	MPa	35-45
Flexural modulus	D-790-04	MPa	1200-1500
HDT, °C @ 0.45MPa	D-648-06	°C	38-41
Izod notched impact	D-256-06	J/m	21-40
Shore hardness (D)	D2240-05	Scale D	76.1-81.7

PRIMARY MATERIAL: **RIGUR™**

SECONDARY MATERIAL: **TANGOBLACKPLUS FLX980**

PROPERTY	ASTM	UNITS	RGD4805-DM RGD4810-DM RGD4815-DM RGD4820-DM
Tensile strength	D-638-03	MPa	25-45
Elongation at break	D-638-05	%	35-45
Modulus of elasticity	D-638-04	MPa	1200-1800
Flexural strength	D-790-03	MPa	30-40
Flexural modulus	D-790-04	MPa	1000-1400
HDT, °C @ 0.45MPa	D-648-06	°C	43-48
Izod notched impact	D-256-06	J/m	50-70
Shore hardness (D)	D2240-05	Scale D	81.1-85.5

PRIMARY MATERIAL: **RIGUR**

SECONDARY MATERIAL: **TANGOBLACKPLUS FLX980**

PROPERTY	ASTM	UNITS	RGD4825-DM RGD4830-DM
Tensile strength	D-638-03	MPa	25-35
Elongation at break	D-638-05	%	35-45
Modulus of elasticity	D-638-04	MPa	900-1500
Flexural strength	D-790-03	MPa	20-35
Flexural modulus	D-790-04	MPa	800-1200
HDT, °C @ 0.45MPa	D-648-06	°C	43-46
Izod notched impact	D-256-06	J/m	50-70
Shore hardness (D)	D2240-05	Scale D	79.5-83.5