



EVASIN EV-4451F DATA SHEET

44 mole%Ethylene Vinyl Alcohol Copolymer

Item	unit	Test Method	Value
Mechanical Properties			
Tensile strength at yield	MPa	ISO 527	66
Tensile strength at break	MPa	ISO 527	24.4
Elongation at break	%	ISO 527	23.1
Young's modulus	MPa	ISO 527	3670
Flexural modulus	MPa	ISO 178	3240
Flexural strength	MPa	ISO 178	91.4
Charpy impact strength	KJ/m ²	ISO 179-1	2.3
Rockwell hardness	HRM	ISO 2039-2	94
Density	g/cm ³	ISO 1183	1.14
Thermal Properties and Melt Characteristics			
Melting point	°C	ISO 11357	165
Crystalization point	°C	ISO 11357	145
Glass transition point	°C	ISO 11357	54
Vicat softening point	°C	ISO 306	154
Melt flow index	g/10min(2160g,190°C)	ISO 1133	1.8
	g/10min(2160g,210°C)	ISO 1133	--
Gas Barrier Properties			
O ₂ Transmission Rate at 20°C 0%RH at 20°C 65%RH at 20°C 85%RH	cm ³ .20µm/m ² .24Hrs.atm	ISO 14663-2	0.8
			1.8
			3.4
Water Vapor Transmission Rate	cm ³ .30µm/m ² .24Hrs.atm at 40°C 90%RH	ASTM E96-E	19



Example of Processing Temperature Profile

	Barrel 1	Barrel 2	Barrel 3	Barrel 4	Barrel 5	Adapter	Die
EV4451F	170	190	200	205	210	200	200

