

Porosity Characterization Chart



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		Porometry (Extrusion)					Porosimetry (Extrusion)	Porosimetry (Intrusion)	Gas Adsorption			Permeametry			Pycnometry					
		Capillary Flow Porometer	Cyclic Compression/Compression Porometer	Integrity Analyzer	Bubble Point Tester	Filtration Media Analyzer	Complete Filter Cartridge Analyzer	Liquid Extrusion Porosimeter	Mercury/Nonmercury Porosimeter	Aquapore	BET Sorptometer	BET Liquid Sorptometer	Liquid Permeameter	Gas Permeameter	Envelope Surface Area Analyzer	Diffusion Permeameter	Water Vapor Transmission Analyzer	Gas Pycnometer	Mercury Pycnometer	
Pore Structure Characteristics	Mean Pore Size	X	X	X		X	X	X	X	X	X	X							Mean Pore Size	
	Pore Size Distribution	X	X	X		X	X	X	X	X	X	X							Pore Size Distribution	
	Total Pore Volume							X	X	X	X	X							Total Pore Volume	
	Bubble Point (largest pore)	X	X	X	X	X	X												Bubble Point (largest pore)	
	Integrity	X		X		X	X												Integrity	
	Gas Permeability	X	X	X		X	X						X				X		Gas Permeability	
	Liquid Permeability	X	X			X	X	X					X						Liquid Permeability	
	Frazier Permeability	X	X			X	X												Frazier Permeability	
	Diffusion Permeability															X	X		Diffusion Permeability	
	Hydro-Head Test	X				X	X												Hydro-Head Test	
	Single Point Surface Area											X	X						Single Point Surface Area	
	Multi-Point Surface Area											X	X						Multi-Point Surface Area	
	Envelope Surface Area	X	X												X				Envelope Surface Area	
	Porosimetry Surface Area							X	X	X									Porosimetry Surface Area	
	Adsorption & Desorption Isotherms											X	X						Adsorption & Desorption Isotherms	
	Chemisorption											X	X						Chemisorption	
	Liquid Vapor Adsorption												X						Liquid Vapor Adsorption	
Bulk Density								X	X									X	Bulk Density	
Absolute Density								X									X		Absolute Density	
Particle Size Distribution								X											Particle Size Distribution	
Operating Conditions	Compression/Cyclic Compression	X	X	X	X	X		X					X	X					Compression/Cyclic Compression	
	Tension	X			X	X							X	X		X			Tension	
	Elevated Temperature	X		X	X	X	X	X	X	X		X	X	X	X	X			Elevated Temperature	
Sample Characteristics	Pore Size Range				0.013-500 μ		2000-0.05μ	0.0035-500μ	0.001-20μ	20x10 ³ -3 Å	N/A	N/A	N/A	N/A	N/A	Down to 2Å	N/A		Pore Size Range	
	Surface Area Range (in m ² /g)							1-100	1-100	> 0.01	10 ⁻³ -50	0.1-10					N/A	N/A	Surface Area Range (in m ² /g)	
	Permeability Range (in darcies)	10 ⁻³ -50		10 ⁻³ -50	N/A	10 ⁻³ -50			N/A	N/A	N/A	N/A				10 ⁻¹² -10 ⁶	N/A	N/A	Permeability Range (in darcies)	
	Permeability Range (Microflow in cc/sec/m/torr)	10 ⁻¹⁰ -10 ⁻⁶		N/A	N/A	10 ⁻¹⁰ -10 ⁻⁶	N/A											N/A	N/A	Permeability Range (Microflow in cc/sec/m/torr)
	Dead-end & Through-pores								X	X	X	X							Dead-end & Through-pores	
	Through-pores only	X	X	X	X	X	X						X	X	X	X	X		Through-pores only	
	Special Sample Requirements						Complete Filters		N/A	Hydro-phobic	N/A	N/A	No Powders	N/A					N/A	N/A
Features	Nondestructive	X	X	X	X	X	X		X			X	X	X	X	X	X		Nondestructive	
	Test Substance	Air Or Noncorrosive Gas						Mercury	Water	Any Pure Gas	Water, Hydro-carbon solvents	Air or Noncorrosive Gas				Helium or non-corrosive gas	Mercury	Test Substance		
Applications	Automated Control	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		Automated Control	
	Automotive Industry	X	X	X	X		X	X	X	X			X	X				X		Automotive Industry
	Battery/Fuel Cells Industry	X	X	X	X			X	X	X			X	X	X	X	X	X		Battery/Fuel Cells Industry
	Ceramic Industry	X		X	X		X	X	X	X	X	X	X	X	X			X	X	Ceramic Industry
	Chemical Industry	X						X	X	X	X		X	X				X		Chemical Industry
	Filtration Industry	X	X	X	X	X	X	X		X			X	X		X				Filtration Industry
	Geotextiles/Textiles Industry	X	X	X	X			X					X	X		X	X			Geotextiles/Textiles Industry
	Nonwovens Industry	X	X	X	X		X	X				X	X		X	X	X			Nonwovens Industry
	Paper Industry	X	X	X	X				X	X	X		X	X	X	X	X			Paper Industry
	Pharmaceutical/Medical Industry	X		X	X	X		X	X	X	X		X	X	X	X	X			Pharmaceutical/Medical Industry
Powder Metallurgy Industry	X						X	X	X	X		X	X		X	X			Powder Metallurgy Industry	