

FOAM AND SPONGE MATERIALS

This PDF lists the main types of foam and sponge materials we stock. For further details on any of these materials, please contact our sales department.

2A1	. . . . .	2
2A2	. . . . .	2
2A3	. . . . .	3
Microcellular Polyurethane	. . . . .	3
PVC Expanded Foam	. . . . .	4
Polyester Urethane .	. . . . .	4
Vinyl Nitrile .	. . . . .	5
Opencell Sponge #3120	. . . . .	5

2A1

2A1 is an excellent general-purpose material designed to seal out water, dust and air.

Composition	NEO/EPDM/SBR
Cell Structure	closed
Density (pcf)	5-7 per ASTM D1667
Low Temperature	-40° F
High Temperature	200° F
Thickness	1/16 to 1"
Flame Resistance - FMVSS no. 302	pass
Change in Compression Deflection (%)	+/- 30
Tensile Strength (psi)	75 per ASTM D412
Compression Set @ 50%	40 max per ASTM D1056
Water Absorption (% weight)	5 max per ASTM D1056
Automotive Specifications:	GM6086M Type 1B , MS-Z-75 2A1
CDF @ 25% (psi)	2.0-5.0 (ASTM D 1056 test method)

2A2

2A2 is a slightly more dense foam than 2A1. This foam is an excellent general-purpose material for sealing out water, dust and air.

Composition	NEO/EPDM/SBR
Cell Structure	Closed
Density (pcf)	4-8 per ASTM D3574
Low Temperature	-70° F
High Temperature	200° F
Thickness	1/16 to 1"
Flame Resistance - FMVSS no. 302	Pass
Elongation (%)	150 per ASTM D412 (Die A)
Tensile Strength (psi)	100 per ASTM D412 (Die A)
Compression Set %	max 35 per ASTM D1056
Water Absorption (% weight)	< 5 per ASTM D1056
Automotive Specifications:	GM6086M Type 11 , MS-Z-75 2A2
CDF @ 25% (psi)	5.0-9.0 (ASTM D 1056 test method)

2A3

2A3 is a very dense foam. It has excellent properties for sealing out water, dust and air.

Composition	NEO/EPDM/SBR
Cell Structure	closed
Density (pcf)	8 - 13 per ASTM D1056-98
Temp Range (continuous)	-70°F to 225°F
Weather Resistance: UV	fair
Thickness	1/16 to 1"
Flame Resistance - FMVSS no. 302	pass
Elongation (%)	120 per ASTM D1056-98
Tensile Strength (psi)	70 per ASTM D1056-98
Water Absorption (% weight)	5 per ASTM D1056-98
Automotive Specifications:	GM6086M Type 11 , MS-Z-75 2A3
CDF @ 25% (psi)	9.0-13.0 (ASTM D 1056 test method)

MICROCELLULAR POLYURETHANE

The compression set resistance of this foam makes it an effective material for applications with repeated compression cycles.

Composition	Specifications
Thickness Spec (%)	+/- 10
Density per ASTM D3574(1) (pcf)	17 nom, 21 nom or 26 nom
Tensile Strength per ASTM D3574-E Die A (psi)	>50 , >75 or >80
Elongation per ASTM D3574-E Die A (%)	>80
Tear Strength per ASTM D624 Die C (pli)	>4, >7 or >9
Compression Deflection at 25% compression per ASTM D3489 (psi)	5+/-30%, 10+/-20% or 15+/-20%
Compression Set @ 50% compression, 23°C per ASTM D3574 (%)	<2
Compression Set @ 50% compression, 70°C per ASTM D3574 (%)	<8
Autoclave then 50% compression, 70°C per ASTM D3574-J2 & -D (1,3,4) (%)	<5
Flammability per MVSS-302 & UL94HBF	Pass
Continuous Use Temp Range	-40°F to 158°F (-40°C to 70°C)
Intermittent Temp Use Maximum	220°F (104°C)
Standard Color	Black
Automotive Specifications:	

PVC EXPANDED FOAM

PVC expanded foam is a versatile, flexible, lightweight and durable material. It has numerous applications, including signage, exhibits, store displays, point-of-purchase displays, kiosks, screen printing and more.

Composition	PVC
Cell Structure	Closed
Density (pcf)	7.0 per ASTM D1667
Tensile Strength (psi)	25 min per ASTM D412
50% CFD (psi)	0.72 - 2.0 per GM6086M TYPE 1A
Elongation (%)	100 min per ASTM D412
Water Absorption (volume, %)	10 max per GTP1
Recommended Service Temp (°F)	-40 to 180
Recommended Application Temp (°F)	50 to 110
Adhesion	Pass
Fungi Resistance	Excellent
Oxidation Resistance	Excellent
Weather Resistance	Excellent
Automotive Specifications:	MSAY 511 A,B,C , ESB-M3G 102-A , GM6086M Type 1A

POLYESTER URETHANE

Polyester Opencell Polyurethane Foam is ideal for sound reduction and sealing out dust and air.

Composition	Polyester Polyurethane
Cell Structure	opencell
Density (pcf)	1.8 to 2.0 per ASTM D3574
CFD @ 25% (psi)	0.4 to 0.74
25% IFD (lb/50 in.sq)	40 - 50 per ASTM D3574
Compression Set (%)	15 max per ASTM D3574
Tensile Strength (psi)	18 min per ASTM D3574
Elongation (%)	100 min per ASTM D3574
Tear Resistance (ppi)	1.8 min per ASTM D3574
Flammability	Pass per UL94HF-1
Automotive Specifications:	FMVSS no. 302

VINYL NITRILE

Vinyl Nitrile/PVC blend offers excellent resistance to acid, gasoline, oil and ozone. This blend can be supplied in different densities and performs well in applications where temperatures can range from 20 to +180°F.

Composition	Vinyl Nitrile / PVC
Cell Structure	open
Density (pcf)	4.5 min per ASTM D 3574
Compression Set:22 hr @ 25°C (%)	15 max per ASTM D1056
Compression Set:22 hr @ 70°C (%)	90 max per ASTMD 1056
Thickness	1/8 to 1"
Flame Resistance	Pass per FMVSS 302
Elongation (%)	150 min per ASTM D412
Tensile Strength (psi)	20 min per ASTM D412
Water Absorption (% weight)	20 max
Tear Resistance (ppi)	6.25 min
Ozone Resistance 72h @ 100pphm, 104°F	Rating "0" per ASTM D1171
Automotive Specifications:	MSAY 522D, WSB-M3G 102-B2

OPENCELL SPONGE #3120

Natural Opencell Sponge #3120 is excellent for cushioning applications as well as applications that require a skid resistant surface. The major advantage of this material is that it does not take a compression set.

Composition	Natural Rubber
Density (PCF)	26
Low Temperature	-20° F
High Temperature	180° F
Thickness	1/16 to 1"