

SuperSheet® Water-Resistant Polyurethane Foams



- Excellent air and water seal properties
- Resistant to compression set
- Soft, yet strong
- Die cut easily and cleanly
- Available in a variety of thicknesses

SuperSheet materials are light-density polyurethane foams featuring excellent water resistance characteristics and physical properties that make them ideal for gasketing and sealing applications.

SuperSheet foams compress with relatively little pressure—they require low compression load deflection force—allowing their use in lightweight assemblies. With very low compression set, these materials provide an excellent alternative to EPDM seals, which have higher compression set values and exhibit significant unrecoverable deformation over time.

In standard form, SuperSheet foams have a thin skin on both upper and lower surfaces. The foams are produced as cast materials in four standard grades varying by hardness, water resistance and density. Standard thicknesses range from 3mm to 15mm. Non-standard thicknesses may be special ordered, depending on the volume. For applications requiring a pressure-sensitive adhesive, a standard 3mil to 5mil acrylic transfer adhesive is recommended.

SuperSheet foams provide cost-effective gaskets in a variety of markets and applications, including automotive, marine vehicles, RVs, appliances, cabinetry and small equipment.

Product Applications

- Automotive seals*
- Door lock seals*
- Mirror gaskets*
- Marine seals*
- Camper gaskets and seals*
- HVAC condenser gaskets*
- Headlight and taillight seals*
- Weather stripping*
- Roof and window seals*
- Prefabricated structure seals*
- Vending machine seals*
- Refrigerator gaskets*
- Display case seals*
- Cabinet and drawer seals*

Standard Product Availability

Thickness	SuperSheet H	SuperSheet H3	SuperSheet H4	SuperSheet H6
3mm	Slit	3.5mm slit	NA	NA
4mm	Slit	NA	NA	NA
5mm	Slit	Slit	Production	Production
6mm	Slit	NA	Production	Production
8mm	Production	NA	Production	NA
10mm	Production	Production	Production	NA

Production—As produced, skin on both sides of foam.

Slit—Slit to thickness, skin on one side of foam.

Non-standard thicknesses may be available by special order.

SuperSheet Polyurethane Foams

Typical Properties and Engineering Estimates

Property	SuperSheet H			SuperSheet H3			SuperSheet H4			SuperSheet H6	
	3mm	6mm	10mm	3.5mm	5mm	10mm	5mm	6mm	10mm	5mm	6mm
Density Nominal kg/m³ (pcf) ASTM D3574	61(3.8)	54 (3.4)	51 (3.2)	64 (4.0)	61 (3.8)	58 (3.6)	59 (3.7)	58 (3.6)	56 (3.5)	61 (3.8)	56 (3.5)
Hardness ASTM D2240 15 sec. post impact, Shore OO			10			23			24		22
Brittleness Temp. C (F) ASTM D746	-60 (-76)			-55 (-67)			-47 (-53)			-47 (-53)	
Tensile Strength kPa (psi) ASTM 3574	193 (28)	193 (28)	179 (26)	248 (36)	214 (31)	221 (32)	248 (36)	234 (34)	241 (35)	283 (41)	214 (31)
Elongation (%) ASTM D3574	208	194	198	114	114	105	104	115	106	101	114
Tear Strength kN/m (lb/in) ASTM D624	0.95 (5.4)	0.78 (4.4)	0.83 (4.7)	0.69 (3.9)	0.65 (3.7)	0.83 (4.7)	0.86 (4.9)	0.79 (4.5)	0.88 (5.0)	0.85 (4.8)	0.76 (4.3)
Compression Set (% original height) 50% Deflection ASTM D1667 22hr @ 23C (73F) ASTM D3574 22hr @ 70C (158F)			2.3			1.8			2.9		2.6
			9.1			6.2			7.8		8.0
Water Absorption (% weight gain) ASTM D570 24hr immersion		5.2			6.0			6.9			4.9
Sealability Maintain water-tight seal 1 hour minimum 23C (73F) GM6086M	Yes			Yes			Yes			Yes	
Compression Load Deflection kPa (psi) ASTM D3574 25% Deflection 50% Deflection			5.9 (0.85) 9.4 (1.4)			12 (1.8) 19 (2.8)			16 (2.3) 35 (5.1)		15 (2.2) 26 (3.7)

Comparison of Typical Properties

Property	E-A-R ISOLOSS® LS 1000 Series	SuperSheet H	SuperSheet H3	Typical Competitive EPDM Foam
Density kg/m³ (pcf)	160 (10.0)	53 (3.31)	60 (3.75)	125 (7.80)
Tensile Strength kPa (psi)	338 (49.0)	167 (24.2)	186 (27.0)	174 (25.2)
Elongation %	80	210	123	240
50% Compression Stress g/cm² (psi)	380 (5.40)	64 (.910)	216 (3.07)	550 (7.82)
50% Compression Set %	0.6	8	7	45
Water Absorption % 50% Compression	>5	0.67	0.21	NA
Water Resistance mm H₂O 50% Compression 80% Compression	<100 <150	150 200-300	300-400 500-2000	4000 NA
Air Permeability cc/cm-sec (ft³/hr)	>0.3 (1.16)	max 0.3 (1.16)	max 0.3 (1.16)	<0.06 (0.23)
Low Temp Brittleness	Very Good	Good	Good	Good
Chemical Resistance	Good	Good	Good	Good
Heat Resistance	Very Good	Very Good	Very Good	Fair
Ozone Resistance	Excellent	Excellent	Excellent	Excellent
Weathering Resistance	Good	Good	Good	Good

The data listed in this data sheet are typical or average values or engineering estimates based on tests conducted by independent laboratories or by the manufacturer. They are indicative only of the results obtained in such tests and should not be considered as guaranteed maximums or minimums. Materials must be tested under actual service to determine their suitability for a particular purpose.