



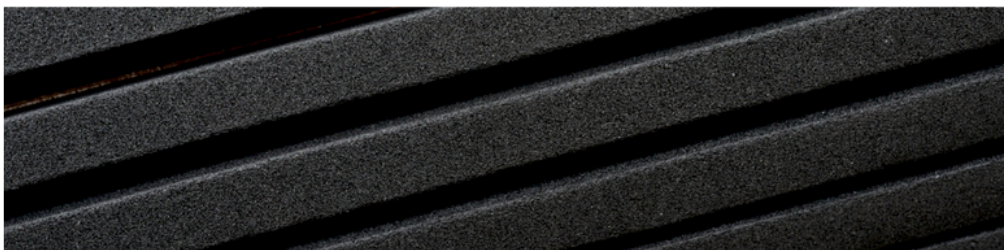
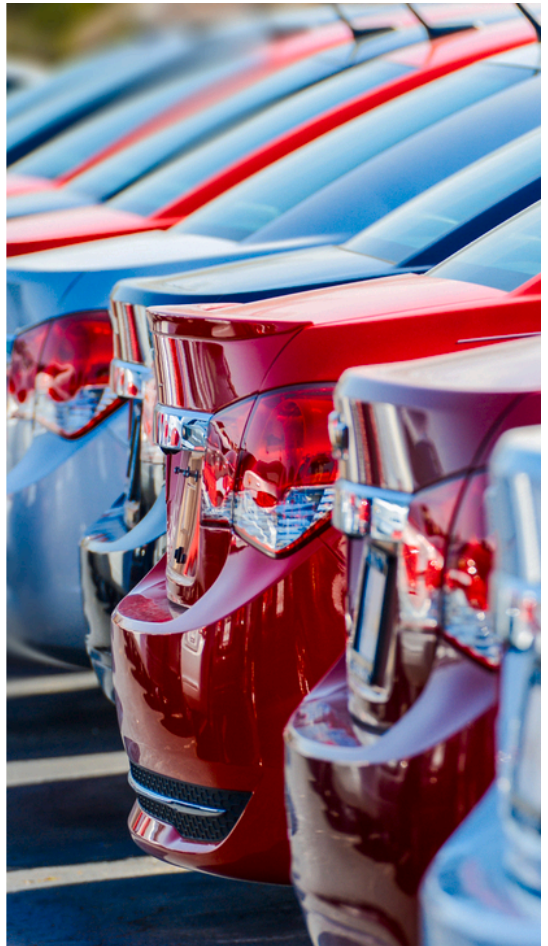
DRIVEN BY PERFORMANCE

Monarch 5013

Engineered gasket solution to provide protection from dust, debris, moisture, and weathering.

- // Medium density
- // Medium firmness
- // Good flame performance
- // Good resistance to ozone and weathering
- // Meets OEM specifications

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TECHNICAL DATA - MONARCH 5013

Brief description	5013 is an EPDM blended, medium firmness, medium density, closed cell foam product made in bun form that meets ASTM D 1056 2A3 requirements. This product is UL listed to UL94 flammability and UL gasket & seals. This product meets automotive specifications.
Product color range	Black
ASTM D 1056 Designation	2A3
Cell structure	Closed
Form	Bun
Polymer	EPDM/CR/SBR
Markets	Automotive, Electrical
Applications	Gaskets and seals

Source	Specification	Comments
Approvals and specifications		
General Motors	GMW 17408 Class I Type V	Interior & Exterior Applications Exception to compression set @ 70°C (158°F) & fogging

Property	Value / Assessment						Standard / Test method
Temperature range							
Service temperature	Min. °C	Min. °F	Max. °C (intermittent)	Max. °F (intermittent)	Max. °C	Max. °F	ASTM D1056
	-55	-67	121	250	93.3	200	
Flammability							
Flame FMVSS 302 (burn rate)	3.94 in/minute (100 mm/minute) max Passes at 0.098 in (2.5 mm) and higher						FMVSS 302
UL standards							
UL94 HBF	Passes at 1.8 mm (0.071 in) minimum thickness UL File # QORU2.E535094 & # QORU8.E535094						UL 94
UL94 HF-1	Passes at 1.4 mm (0.055 in) - 1.8 mm (0.071 in) thickness only UL File # QORU2.E535094 & # QORU8.E535094						UL 94
Resistance to water							
Water absorption by vacuum	5% max						ASTM D1056
Physical attributes							
Density	7 - 11 lb/ft ³ 112 - 176 kg/m ³						ASTM D1056
Mechanical properties							
Compression set	35% max						ASTM D1056
Tensile strength	75 psi min 517 kPa min						ASTM D412 (Die A)
Elongation	125% min						ASTM D412 (Die A)
Tear strength	9 lb/in min 1.6 kN/m min						ASTM D624 (Die C)
Hardness durometer shore 00	50 - 70						ASTM D2240

Property	Value / Assessment	Standard / Test method
Resilience	25 - 35%	ASTM D2632
Compression deflection		
Compression deflection 25%	9 - 13 psi 62.1 - 89.6 kPa	ASTM D1056
Compression deflection 50% - 60 sec hold	14.07 - 24.95 psi 97.01 - 172 kPa	ISO 3386-1
Change in compression deflection	±30 %	ASTM D1056
UL Listed		
UL gaskets and seals	UL File # JMLU2.MH25062 Suitable for UL50E continuous & periodic compression applications for enclosure types: 2, 3, 3X, 3R, 3RX, 3S, 3SX, 4, 4X, 5, 6, 6P, 12, 12K and 13 including oil immersion. Suitable as gasket material for use in UL 48 - Electric Signs. Suitable as gasket material for use in UL 508 - Industrial Control Equipment UL gaskets & seals max service temperature: 60°C (140°F)	UL 48, UL 508, UL 50E

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As the inventor of flexible foam for equipment insulation and a leading provider of engineered foams, Armacell develops innovative and safe thermal and mechanical solutions that create sustainable value for its customers. Armacell's products significantly contribute to global energy efficiency making a difference around the world every day. With more than 3,300 employees and 25 production plants in 19 countries, the company operates two main businesses, Advanced Insulation and Engineered Foams. Armacell focuses on insulation materials for technical equipment, high-performance foams for acoustic and lightweight applications, recycled PET products, next-generation aerogel technology and passive fire protection systems.

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