



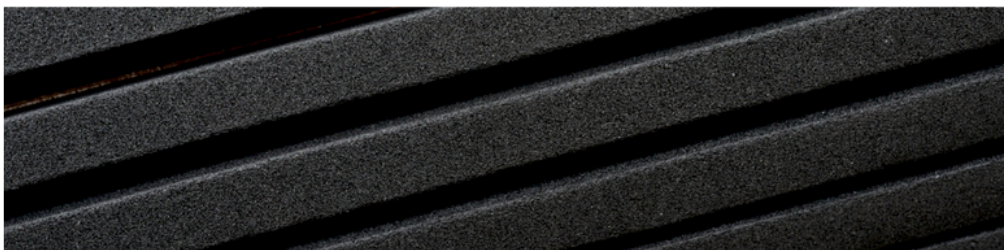
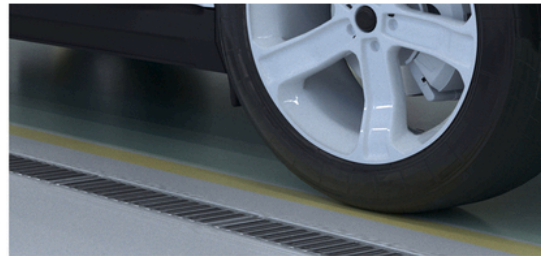
DRIVEN BY PERFORMANCE

Monarch 3091

Engineered solution for gasket and seal applications.

- // Low density
- // Soft firmness
- // Broad service temperature range
- // Meets OEM specifications

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TECHNICAL DATA - MONARCH 3091

Brief description	3091 is a 100% EPDM soft, low density, foam product that meets ASTM D 1056 2A1 requirements. It is an excellent solution for outdoor applications where ozone resistance is needed or for low temperature applications. It is a good solution for high heat applications. This product meets various automotive specifications.
Product color range	Black
ASTM D 1056 Designation	2A1
Cell structure	Closed
Form	Bun
Polymer	100% EPDM
Markets	Automotive
Applications	Gaskets and seals

Source	Specification	Comments
Approvals and specifications		
General Motors	GMW 17408 Class I Type IV	Interior & Exterior Applications Exception to compression set @ 70°C (158°F) & fogging
Stellantis (FCA / Chrysler)	MSAY 430 MS.90145 Type 2	
MAHLE	GN AR 06220 Par 6.10	Previously Delphi SD2-207 Par 6.10

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
	-75	-103	121	250	104	220	
Flammability							
Flame FMVSS 302 (burn rate)	3.94 in/minute (100 mm/minute) max Passes at 0.188 in (4.76 mm) and higher						FMVSS 302
Resistance to water							
Water absorption by vacuum	10% max						ASTM D1056
Physical attributes							
Density	3 - 5 lb/ft ³ 48 - 80 kg/m ³						ASTM D1056
Mechanical properties							
Compression set	45% max						ASTM D1056
Tensile strength	40 psi min 276 kPa min						ASTM D412 (Die A)
Elongation	150% min						ASTM D412 (Die A)
Tear strength	6 lb/in min 1.05 kN/m min						ASTM D624 (Die C)
Hardness durometer shore 00	30 - 50						ASTM D2240
Resilience	50 - 70%						ASTM D2632

Property	Value / Assessment	Standard / Test method
Compression deflection		
Compression deflection 25%	2 - 5 psi 13.8 - 34.5 kPa	ASTM D1056
Compression deflection 50% - 60 sec hold	6.96 - 14.07 psi 48.01 - 97 kPa	ISO 3386-1
Change in compression deflection	±30 %	ASTM D1056

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ABOUT ARMACELL

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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