



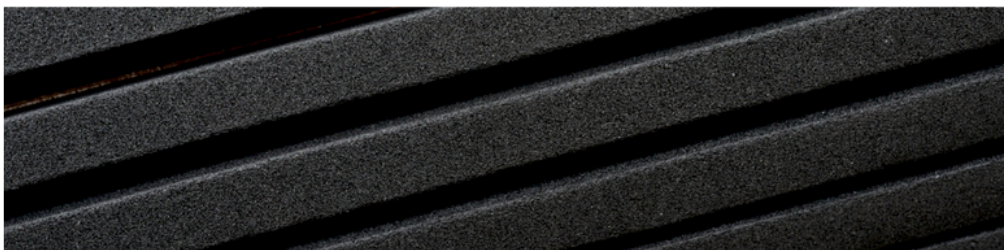
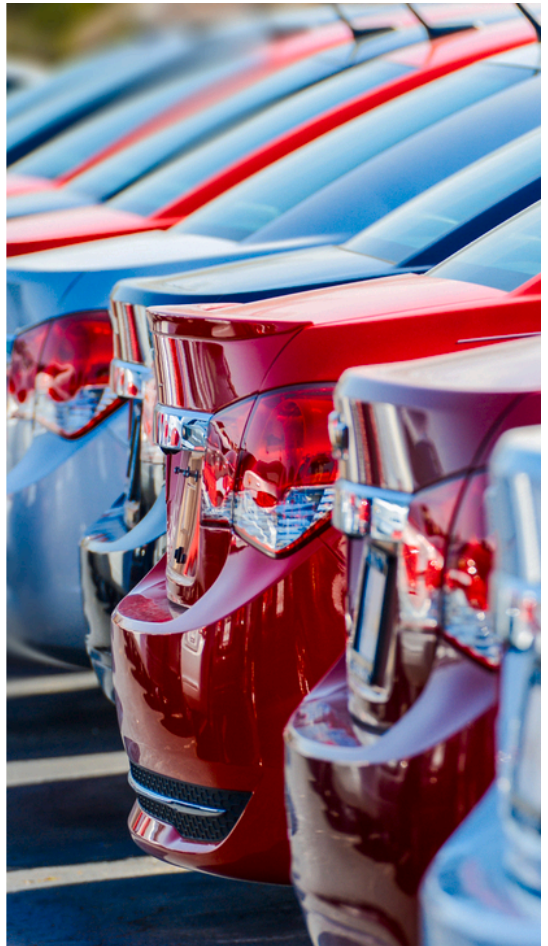
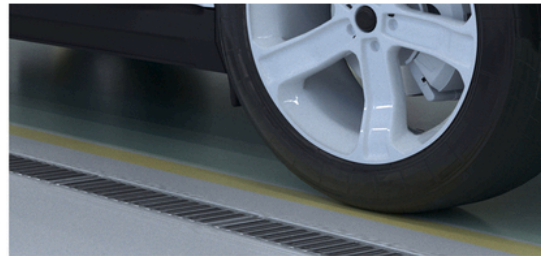
DRIVEN BY PERFORMANCE

# Monarch 4051

Engineered sealing solution to avoid damage to components in high heat applications and where resistance to both oil and fuel are required.

- // Medium density
- // Soft firmness
- // Excellent ozone resistance
- // Superior oil and fuel resistance

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## TECHNICAL DATA - MONARCH 4051

Brief description	4051 is an epichlorohydrin (ECH), closed cell foam product produced in bun form. It is a soft, medium density, foam product that meets ASTM D 1056 2B1 requirements. 4051 is an excellent solution for applications where resistance to high temperature and/or oil/fuel is required.
Product color range	Black
ASTM D 1056 Designation	2A1/2C1/2B1
Cell structure	Closed
Form	Bun
Polymer	ECH
Markets	Automotive
Applications	Gaskets and seals

Property	Value / Assessment						Standard / Test method
<b>Temperature range</b>							
Service temperature	Min. °C	Min. °F	Max. °C (intermittent)	Max. °F (intermittent)	Max. °C	Max. °F	ASTM D1056
	-40	-40	163	325	149	300	
<b>Flammability</b>							
Flame FMVSS 302 (burn rate)	3.94 in/minute (100 mm/minute) max Passes at 0.125 in (3.18 mm) and higher						FMVSS 302
<b>Resistance to water</b>							
Water absorption by vacuum	5% max						ASTM D1056
<b>Physical attributes</b>							
Density	12 - 18 lb/ft <sup>3</sup> 192 - 288 kg/m <sup>3</sup>						ASTM D1056
<b>Mechanical properties</b>							
Compression set	35% max						ASTM D1056
Tensile strength	40 psi min 276 kPa min						ASTM D412 (Die A)
Elongation	250% min						ASTM D412 (Die A)
Tear strength	12 lb/in min 2.1 kN/m min						ASTM D624 (Die C)
Hardness durometer shore 00	40 - 60						ASTM D2240
Resilience	28 - 38%						ASTM D2632
Fluid immersion	60% max						ASTM D1056
<b>Compression deflection</b>							
Compression deflection 25%	4 - 8 psi 27.6 - 48.3 kPa						ASTM D1056
Change in compression deflection	±30 %						ASTM D1056

All data and technical information are based on results achieved under the specific conditions defined according to the testing standards referenced. Despite taking every precaution to ensure that said data and technical information are up to date, Armacell does not make any representation or warranty, express or implied, as to the accuracy, content or completeness of said data and technical information. Armacell also does not assume any liability towards any person resulting from the use of said data or technical information. Armacell reserves the right to revoke, modify or amend this document at any moment. It is the customer's responsibility to verify if the product is suitable for the intended application. The responsibility for professional and correct installation and compliance with relevant building regulations lies with the customer. This document does not constitute nor is part of a legal offer to sell or to contract.

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# ABOUT ARMACELL

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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.

For more information, please visit:  
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