

DRIVEN BY PERFORMANCE

Monarch[®] 4051

Closed cell Epichlorohydrin (ECH) based foam in bun form

// ASTM D 1056 2A1/2C1/2B1

// Manufactured in buns (blocks)

// Higher density, specialty expanded rubber

// Elevated temperature and oil & fuel resistant

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 **armacell**[®]
ArmaComp[™]

MONARCH 4051 | Closed cell Epichlorohydrin (ECH) based foam in bun form

Monarch 4051: Armacell (Spencer, WV Plant) manufactures a black, closed cell, 12 - 18 lb/ft³ (192 - 288 kg/m³) density, Epichlorohydrin (ECH) based rubber product 4051, that meets the physical property requirements of ASTM D 1056 2A1 / 2C1 / 2B1. 4051 meets the horizontal burn / flame requirements of FMVSS 302 at thicknesses of 1/8" (0.125") (3.175 mm) and higher.

TECHNICAL DATA SHEET | BUNS (effective 27AUG21)

POLYMER: ECH

Physical Property	Test Method	Unit	Value	
ASTM D 1056 Designation	-	-	2A1/2C1/2B1	
Cell Structure	-	-	Closed	
Color	-	-	Black	
Compression Deflection 25%	ASTM D 1056	psi kPa	2 - 5 13.8 - 34.5	
Compression Deflection 25%, after Heat Aging	ASTM D 1056	%	± 30	
Compression Set (Room temp)	ASTM D 1056	%	35 max	
Density	ASTM D 1056	lb/ft ³ kg/m ³	12 - 18 192 - 288	
Elongation	ASTM D 412 (Die A)	%	250 min	
Flammability	FMVSS 302	in mm	0.125 and higher 3.18 and higher	
Fluid Immersion	ASTM D 1056	%	50 max	
Hardness, Durometer Shore 00	ASTM D 2240	-	40 - 60	
Resilience	ASTM D 2632	%	28 - 38	
Service Temperature	Low	ASTM D 1056	°F °C	-40 -40
	High Continuous	-	°F °C	300 148.8
	High Intermittent	-	°F °C	325 162.7
Tear Strength	ASTM D 624 (Die C)	lb/in kN/m	12 min 2.1 min	
Tensile Strength	ASTM D 412 (Die A)	psi kPa	40 min 276 min	
Water Absorption	ASTM D 1056	%	5 max	

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Monarch 4051 | DataSheet | 082021 | NA | EN-A

ABOUT ARMACELL

As the inventors of flexible foam for equipment insulation and a leading provider of engineered foams, Armacell develops innovative and safe thermal, acoustic 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 3,200 employees and 24 production plants in 16 countries, the company operates two main businesses, Advanced Insulation and Engineered Foams. Armacell focuses on insulation materials for technical equipment, high-performance foams for high-tech and lightweight applications and next generation aerogel blanket technology.

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