

Arm Cap Solutions



Bring us your challenge:
Custom Foam Systems feels
good about the future.

Innovative Solutions by Dedicated People

Since 1973, Custom Foam Systems has been an industry leader in the development and manufacturing of polyurethane foam components.

Our success lies in our vision of finding innovative solutions for our customers' polyurethane foam needs. We are guided by research that develops distinctive new polyurethane foam materials and application technology to help customers meet the challenges of a changing world.

For more information call Mark Germann at 1-519-748-1700 x 231
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Visit www.customfoam.com/armcapsolutions

Custom Foam Systems is excited to offer three innovative arm cap solutions. With each of these environmentally friendly alternatives, our product development team utilizes a process that ensures premium first-time quality, delivered on time.

Providing exceptional design freedom and durability, self-skinning polyurethane has been the traditional arm cap material of choice. Now, Custom Foam Systems has created a new, exciting standard of aesthetics, comfort, and durability that will enhance your customers' experience. FUSION.

Revolutionizing Arm Cap Solutions

Custom Foam Systems is pleased to introduce yet another industry first. FUSION components are made by an exclusive, automated manufacturing process designed to create a ground breaking, next generation arm cap solution. It creates an inseparable bond between an elastomer skin and finishing foam substrate of your choice; i•skin or our innovative Gel•Foam products. FUSION provides seamless durability, high-quality comfort, is characterized by sleek aesthetics and designed at a cost-competitive price. Revolutionary FUSION products provide more choice than ever to chair OEM's.



Economical and versatile choice.

Integral Skin (i•skin) has a new and improved material formulation that provides a tougher skin and a softer core. It allows for great design flexibility, insert encapsulation, and is recyclable.

i•skin is:

- highly durable and can be disinfected; manufacturing experience at CFS of over 25 years
- wear resistant for high traffic areas and applications
- high quality in terms of aesthetics, colour, gloss, and fit



Ultimate in pressure reduction comfort.

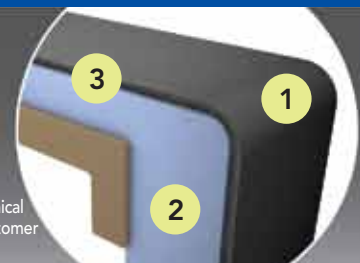
A unique, Custom Foam Systems product, for more than five years we have been an exclusive Gel•Foam supplier in arm-rest applications throughout North America and Europe.

With a proven track record through rigorous testing, this innovative and new material features:

- a construction of homogeneous "gel-like" visco-elastic Integral Skin material
- high durability and stain resistant
- a captivating "feel" and tremendous pressure-reduction comfort

Arm Cap Cross-Section

- 1 **Top Surface:** 1 mm of polyurethane elastomer skin – provides unmatched durability and aesthetics
- 2 **Inner Core:** Exclusive Gel•Foam – provides the benefits of gel without the leaks
- 3 **Bonding Process:** The invisible chemical bond that is created between the elastomer skin and inner core foam



FUSION Features:

- exclusive FUSION components possess an inseparable bond between elastomer skin and foam substrate
- cost-comparative to other high performance arm cap products
- tough urethane technologies provides durable, puncture resistant, waterproof construction
- i•skin or exclusive Gel•Foam substrates deliver leading-edge comfort and quality, making it an industry benchmark
- in mould coating (IMC) ensures UV protection, consistent gloss and a variety of colours
- custom designed tooling can be interchanged between all CFS Arm Cap materials for maximum flexibility
- energy-efficient "green" production with no PVC's

All CFS Arm Cap material options undergo rigorous "Accelerated Field Usage" testing to ensure they meet our customers' high standards for quality.



Custom Foam Systems is a proud supplier of foam materials to office-chair manufacturers around the world who have attained the highest standards of accreditation in environmental safety and reducing the impact we have on our environment. We strive to meet and exceed the challenges of providing "green-material solutions" that contribute to our customers' success in the marketplace. Our state-of-the-art facility therefore meets the strictest regulatory standards for foam manufacturing. We use water as a blowing agent and do not use CFCs, HCFCs, VOCs, or any ozone depleting substances.

Arm Cap Solutions

Material Specifications

i•skin



Innovatively formulated, CFS i•skin is an Integral self skinning polyurethane (PU). Key attributes include a surprisingly soft-touch feel, in-mould etch texturing or graphics, adjustability for varying degrees of compression, high serviceability over wide temperature ranges, and inherent toughness. Suitable for production of durable comfort surface products like arm rests, headrests, handles, steering wheels and keyboard palm rests. This product is CFCs and/or VOCs free.

PROPERTY	TEST METHOD	UNIT	VALUE / RESULT
Density	ASTM D 792	Lbs/cu. ft	Range 15 – 30
Hardness	ASTM D 2240	Shore A	Range 10 – 50
Tensile Strength	ASTM D 412	Lbs/sq in.	200
Ultimate Elongation	ASTM D 412	%	300
Tear Strength Die C	D 624	Lbf/in.	50
Abrasion Resistance	ASTM D 4060 (Taber)	Mg Loss	180
Abrasion Resistance	Ford Steering Wheel	1,000 Cycle Result	Pass
UV Stability	Xenon Arc	ASTM G155-05a	Pass
UV Stability	Arizona Weathering	12 Month	Pass
Crocking Resistance	AATCC 8-2005	Pass / Fail	Pass
Flammability	MVSS-302	Pass / Fail	Pass
Flammability – upon request	Cal 117-A	Pass / Fail	Pass

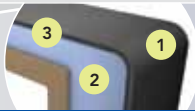
GEL•Foam



An exclusive CFS material formulation, GEL•Foam is characterized by a dynamic, gel-like compression. Its non-porous skin surface is robust and can be disinfected. Utilized with office chairs since 2002, GEL•Foam has a well established track record for performance. This self skinning PU possesses all the benefits of CFS i•skin with an intriguing gel feel.

PROPERTY	TEST METHOD	UNIT / CRITERIA	VALUE / RESULT
Density	ASTM D 792	Lbs/cu. ft	22
Hardness	ASTM D 2240	Shore A	Range 10 – 20
Tensile Strength	ASTM D 412	Lbs/sq in.	180
Ultimate Elongation	ASTM D 412	%	400
Tear Strength Die C	D 624	Lbf/in.	40
Abrasion Resistance	ASTM D 4060 (Taber)	Mg Loss	180
Abrasion Resistance	Ford Steering Wheel	1,000 Cycle Result	Pass
UV Stability	Xenon Arc	ASTM G155-05a	Pass
UV Stability	Arizona Weathering	12 Month	Pass
Crocking Resistance	AATCC 8-2005	Pass / Fail	Pass
Flammability	MVSS-302	Pass / Fail	Pass
Flammability – upon request	Cal 117-A	Pass / Fail	Pass

FUSION



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Another industry first and exclusive manufacturing method has been invented to create FUSION moulded components. Manufacturing cells at CFS utilize a robotic spray skin process inline with the reaction injection moulding process. The result is a two stage, single cycle process which yields high quality FUSION components and with it, a new classification of PU technology.

FUSION components achieve a higher class of physical properties and mechanical specifications than most other moulded PU or upholstery materials. The thin layer of elastomeric skin, due to its high density and premium quality chemistry inputs, provides a unique combination of comfort and toughness.

Other FUSION attributes – liquid proof, chemical resistance, anti-microbial, puncture resistance, and the ability to be disinfected.

PROPERTY	TEST METHOD	UNIT	VALUE / RESULT
Density of the Skin	ASTM D 792	Lbs/cu. ft	60
Hardness of the finished good	ASTM D 2240	Shore A	Range 20 – 40
Tensile Strength	ASTM D 412	Lbs/sq in.	890
Ultimate Elongation	ASTM D 412	%	500
Tear Strength Die C	D 624	Lbf/in.	190
Abrasion Resistance	ASTM D 4060 (Taber)	Mg Loss	160
Abrasion Resistance	Ford Steering Wheel	1,000 Cycle Result	Pass
UV Stability	Xenon Arc	ASTM G155-05a	Pass
UV Stability	Arizona Weathering	12 Month	Pass
Crocking Resistance	AATCC 8-2005	Pass / Fail	Pass
Flammability	MVSS-302	Pass / Fail	Pass
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The physical properties are provided as general information only and the values are approximate. Individual components properties are determined by actual moulded densities.

Team Based Product Development

- It is our vision to be the very best at developing innovative solutions for our customer's polyurethane foam needs.
- Our unique PU systems are the result of many years of experience, research and development, investment and dedication, and offer our customers the finest material solutions and newest technologies.
- Our cross-functional product development team will initially focus on a collaborative "Voice of the Customer" exercise to ensure that your specifications, intentions, ideas, and desires are well understood.
- From there, the team will utilize Advanced Product Quality Planning (APQP) to make certain that very best solution becomes manufactured reality while using cost, quality and on-time delivery as their measured goals.



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