

苏州申赛新材料有限公司 Shincell New Material Co., Ltd



绿色轻量化发泡材料

Clean, light-weight foam materials



Company Profile

- Established in March 2019 in High-tech Zone, Suzhou
- Committing to sustainable and clean polymer foaming technology and R&D of light-weight highperformance foam materials; having its R&D center and labaratory located right in the factory
- Specializing in manufacturing, sales and solutions of light-weight and high-performance foams
- ISO14001 Environmental Management System Certification and ISO 9001 Quality Management
 System Certification
- GRS Certificate for the Supercritical Foaming Process







Development





A platform for the Industrialization of Supercritical Fluid Polymer Solid-state Foaming

1. Utilizing the fast diffusion rate and great solubility of supercritical CO2 in polymers.

2. The polymer is in a semi-solid state when foaming; the high melt strength can maintain the cell structure.

3. Rapid pressure release, leading to extremely high nucleation ratio

4. Applicable to various polymers



半结晶热塑性弹性体的DSC曲线





Intellectual Property

 FTO (Freedom To Operate)
 assessment obtained from the law firm without infringement,
 against the patent existed in the key regions globally.

Various Patents (more than 20 patents), including PCT patent, applied across the foaming process, machinery and tooling.





Production and Lab Facilities



CO2/N2 Gas station



laboratory



laboratory



Beads Foaming Machine



One-scroll Extruder



Sheete Factor



Digitized Cutting Machine

Twin-scroll Extruder

Sheets Foaming Machine

Qualifications and Honors

SHINCELL



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SHINCELL Joint R&D Center of Universities and Shincell



苏州工业技术研究院 Suzhou Industrial Technology Research Institute 察合物轻量化材料联合研发中心 Joint R&D Center of Lightweight Polymer Materials



Shincell has established a joint R&D center for Lightweight Polymer Foams with Zhejiang University Suzhou Industrial Technology Research Institute and one for New Material Development and Intelligent Application Technology with East China University of Science and Technology.

Shincell obtained 3 million yuan for the R&D platform construction from Suzhou Industrial Technology Research Institute of East China University of Science and Technology



Industries We Serve

Information and

Communication

(Microwave radome, radomes)

EV Batteries (Battery Buffer)

(Lightweight Interior Finishing foams)

Vehicles











Sports & Health (Shoes and Clothing, Fitness Mat)

Foams for Electronics (CMP Polishing,CAM Seals)



Microcellular Highstrength PP Foams



Microcellular Thermoplastic Elastomers-MTPU, MTPEE



Microcellular Thermoplastic Elastomers-High-elastic Foams Pebax/ATPU





< 1mm











Radomes for 5G Communication **PP** Foam

Wafer CMP Pads **TPU** foam









Lithium-ion Battery Cell Buffers **FR-MPP** Foam

Fitness Pads TPU/TPEE/Peba Foam















Radomes for 5G Communication

MPP Properties:

- Low dielectric constant and dielectric loss meeting the demand of microwave transmission
- Lightweight and high-strength, wind resistance
- Water-resistant, not hanging water on the surface therefore not affecting the wave transmission
- Anti-photooxidative aging, 10-year lifespan









High flame-retardant MPP series have been applied to Pouch Cells and Power Batteries

Functions of MPP:

- (1) Scalable deformation, compensation for assembly tolerances, providing preload
- (1) UL94 HF-1 Flame-retardant
- (2) Resistance to electrolyte corrosion
- (3) Withstanding voltage breakdown







100% Recyclable Series-Adidas Futurecraft Loop



Huntsman/Shincell/Adidas Futurecraft Loop Insole Solution

Other insole and midsole projects

104103-02582

启动反馈

(P-SOON)

前掌填充轻质高弹新科技材料

26

Service of Standards

12034042.5478 = 25-28 = 0.14-0.18 = 55-58



ior marathon

Marathon Running Shoes Midsole

High-elastic foam, ATPU and MPebax are targeted at high-performance running shoes with high energy return and extreme light-weight midsoles

Properties	MPebax	A-TPU	
Density (g/cm3)	0.05-0.1	0.05-0.1	
Ball Rebound %	80	80	
Compression set %	25-30	25-30	
E-distription	EBA midsole	R F3 CPU los	
Running shoe	目后齐支体系	過中處 洗注型緊氯聯大度	





Midsole of Peba foam, supercritical foaming tech.

实现 100%无裂痕熔结 大幅提升材料抗撕裂能力 同比其他超临界发泡材料具有 更轻、更弹、后程衰减更少的优点 "无痕技术"具有"可逆性" 实现材料恢复出厂状态的完美清洁回收





MTPU Fitness Mat:

- Light-weight and high energy return, providing unparalleled user experience
- Safe and environmentally friendly, non-toxic and no ordor
- Low compression set data, good unfolding performance and good anti-slip performance
- Anti-mildew and anti-bacterial due to its closed-cell structure





SHINCELL Committed To Sustainable Foaming Technology

Lightweight Aviation Interior Foam

Shincell is the second PVDF foam supplier in the world

The density of PVDF range from 40 to 70kg/m3

UL94 V0 flame-retardant, lightweight foam for aviation, widely used in aircraft interior finishing and structural parts



测试报告 _{编号} : SHIN2001000857MR_CN _{日期} : 2020-01-16

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结果总结:

SGS

8	序号	测试项目	测试方法	结果	结论
	1	垂直燃烧	UL 94-2013 Rev.9- 2018 第 8 节	等级: V-0	合格

备注: 合格:达到要求

不合格: 未达到要求

测试结果:

处理条件	常态: (23±2)℃, (50±5)%RH, 48h				老化: (70±2)℃, 168h→ 干燥器, (23±2)℃, 4h					
试样	1	2	3	4	5	1	2	3	4	5
第一次施加火焰后余焰时间 (s),t ₁	0	0	0	0	0	0	0	0	0	0
第二次施加火焰后余焰时间 (s), t ₂	0	0	0	0	0	0	0	0	0	0
第二次施加火焰后余辉时间 (s),t ₃	0	0	0	0	0	0	0	0	0	0
任何状态调节,总余烙时间 (s), t1+t2		L	0	,			Į	0		I
第二次施加火焰后余焰时间加余辉 时间 (s),t2+t3	0	0	0	0	0	0	0	0	0	0
试样余焰或余辉是否蔓延到夹具	否	否	否	否	否	否	否	否	否	否
燃烧颗粒或滴落物是否引燃脱脂棉	否	否	否	否	否	否	否	否	否	否
※25年49月4年30月6日71年20月1日2月11年2月1日 等級: V-0 (见表 1) 客户要求: 等级: V-0 生込、△枚	4	f	Π.	4	4	Π.	4	A	e e	



Committed to sustainable foaming technology, Shincell is aiming to become a global leading supplier of high-performance lightweight materials and their solutions!





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