

GRECO



大東樹脂化學股份有限公司
GREAT EASTERN RESINS INDUSTRIAL CO., LTD.

堅持品質,綠色未來
ECO-solution to the Future

SCF(Supercritical Fluid) TPU Foam Series



Insole

ETPU: 6315BM / 6315CM
Injecting/ Autoclave foam:
3085AU-BF, 7385A-BF

Midsole

ETPU: 6315BM / 6315CM
Injecting/ Autoclave foam:
3085AU-BF, 7385A-BF

- The upper is followed by a polyester hot melt series
- Shoe Trim - Polyester high cycle series
- Outsole - Polyester abrasion resistant specification series
- Heel Stabilizer - Glue specification series

For other TPU shoe material information, please contact GRECO.



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E-TPU ISOTHANE®

ECO-FRIENDLY, RECYCLABLE, NO CHEMICAL ODOR

THE PERFECT COMBINATION OF LOW DENSITY AND HIGH RESILIENCE

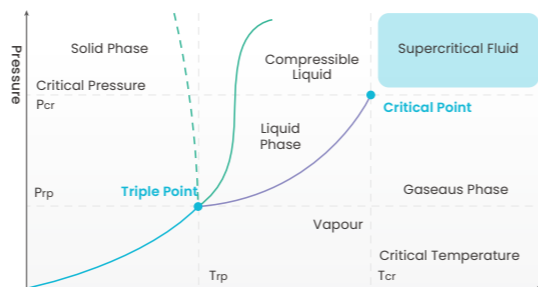
ETPU supercritical SCF physical foam

SCF supercritical fluid

When the pressure and temperature of the gas above its critical point, the supercritical fluid characteristics will appear, which has properties between those of gas and liquid, and can be used as a good physical foaming agent.

Sustainable, clean, odorless

Foaming Agent:
Supercritical Fluid (N₂ or CO₂)



TPU SCF SCF ETPU Foam

E-TPU (Foam Bead)

SFC Injection Foaming

Autoclave Foaming

ETPU Products

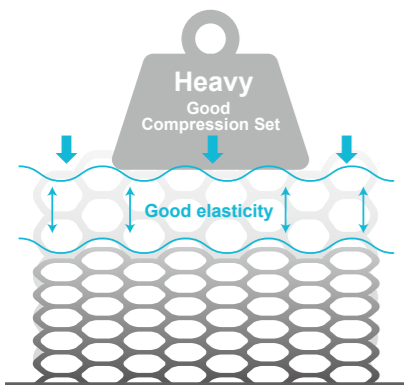
Foam Bead

Item	Bulk density (kg/m ³)	Pellet size (mm)	Product feature	Application
6310BM	100~120	4~7	Made of polyether TPU, it has excellent hydrolysis resistance, good resilience (>60%), good compression resistance, and comfortable flexibility.	Shoe materials, yoga mats
6315BM	120~140	4~7		
6315BS	120~160	2~4		Filling, soundproofing
6315CM	120~145	4~7	It is made of polyether TPU, with high supportability, excellent hydrolysis resistance, good compression resistance, and good energy absorption characteristics.	Sports cushioning material, protective gear
6315DM	150~170	4~7	It is made of polyether TPU, with high hardness specification, high supportability, excellent hydrolysis resistance, and good compression resistance.	Airless tires

Foam Sheet

Item	Size(cm)	Density(g/cm ³)	Applications
E315BM909005	90 x 90 x 5	0.20~0.26	Sporting goods, Plastic tracks

ETPU Features



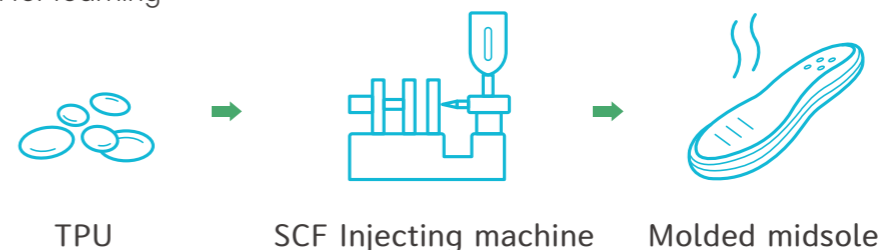
- Low density** Density : 100-200 kg/m³
- Good performance at low temperature** High elasticity and softness even at -25°C.
- Anti-yellowing** Anti-yellowing material, also have non-yellowing grade.
- Good abrasion resistance** Very low abrasion.
- High flexing endurance** Finished goods can bear up to 120,000 bends.
- Low compression set** Compressed reply >90%.
- Eco-friendly material** All raw materials and processes are environmentally friendly.

TPU products used in the foaming field

Item	Injecting/ Autoclave foam Density(kg/m ³)	Product feature
1085AU-BF	0.18~0.22 / 0.16~0.20	It has a good mechanical strength and a relatively high cost performance
3085AU-BF	0.15~0.20 / 0.12~0.17	It is made of polyether TPU, which has excellent hydrolysis resistance and good resilience (>60%)
7385A-BF	0.15~0.20 / 0.12~0.17	It is made of aliphatic polyether TPU, which has excellent hydrolysis resistance, good resilience (>60%), and non-yellowing properties.
3090AU-BFL	0.19~0.24 / 0.16~0.21	It has excellent cushioning properties and can be used in energy-absorbing products such as protective gear and safety helmets.

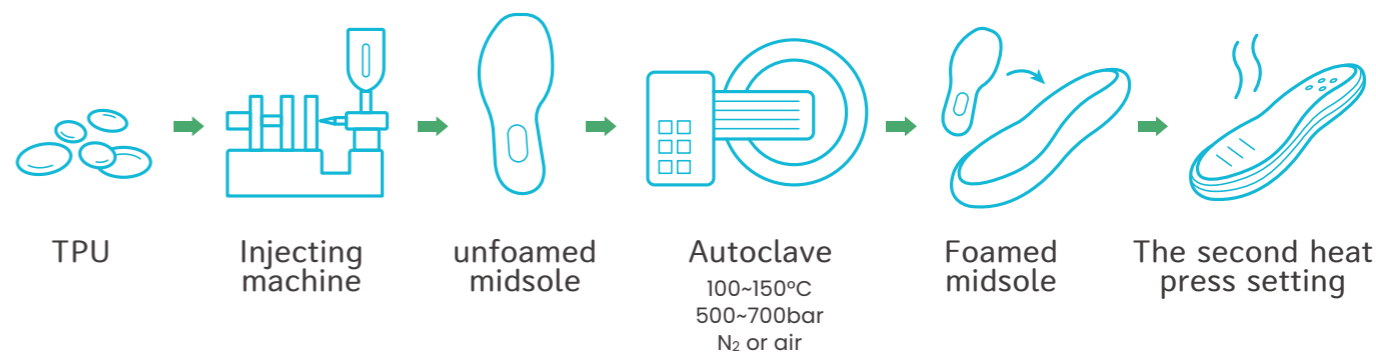
Injection foaming

In injection machine, the SCF blowing agent is added and mixed with polymer, and then it is injected into the mold for foaming



Autoclave foaming

First shoot TPU is injected to a unfoamed midsole, then put the unfoamed midsole into a high-pressure autoclave Relieve pressure and foam into a foamed midsole, and then put it into a hot and cold press machine to shape.



Application in multiple fields, and it is eco-friendly and recyclable

★ The main application ★



Shoe material



Sports supplements



Sporting goods



Plastic tracks



Tire