

Joyce

Hygroflex  Technical Presentation



**INNOVATION
IS OUR DRIVE**



**A BETTER CHOICE
FOR THE ENVIRONMENT**



**KEEPING YOU
COMPETITIVE**



**CREATING
HEALTHIER HOMES**

Hygroflex[™] INDULGE Advantage

- Hygroflex conforms to the shape of your body up to 67% better than traditional memory foams
- Hygroflex reduces the maximum pressure on your body by up to 32% compared to traditional memory foams
- Hygroflex takes heat away from your body up to 27% faster than traditional memory foams
- Hygroflex improves sleep efficiency with increased comfort and low resistance to movement

HygroflexTM Research

INDULGE

- Clinical study conducted at RMIT Melbourne by School of Engineering
- Supported by the Australian Government Department of Industry, Innovation and Science
- Examines the effectiveness of Hygroflex as a pressure redistribution material compared to traditional memory foams

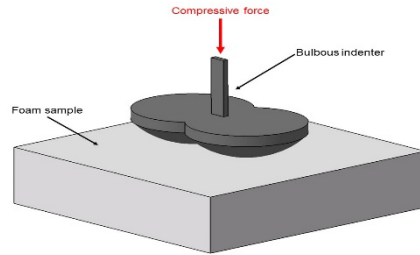


Business
Entrepreneurs' Programme



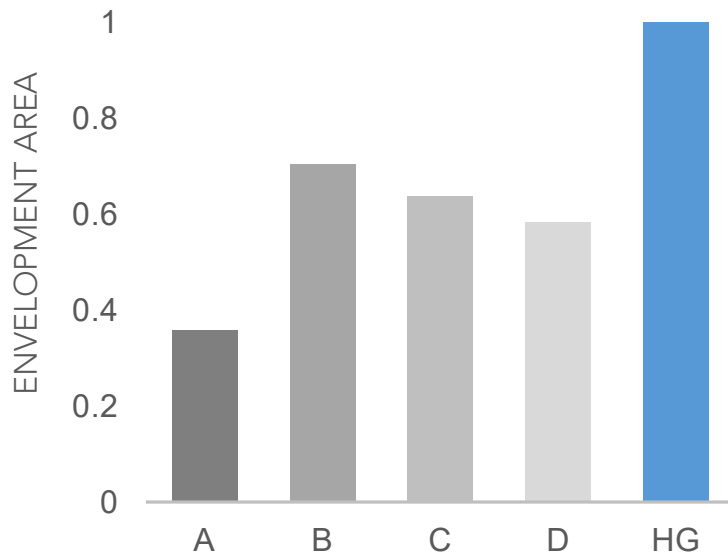


PRESSURE REDISTRIBUTION

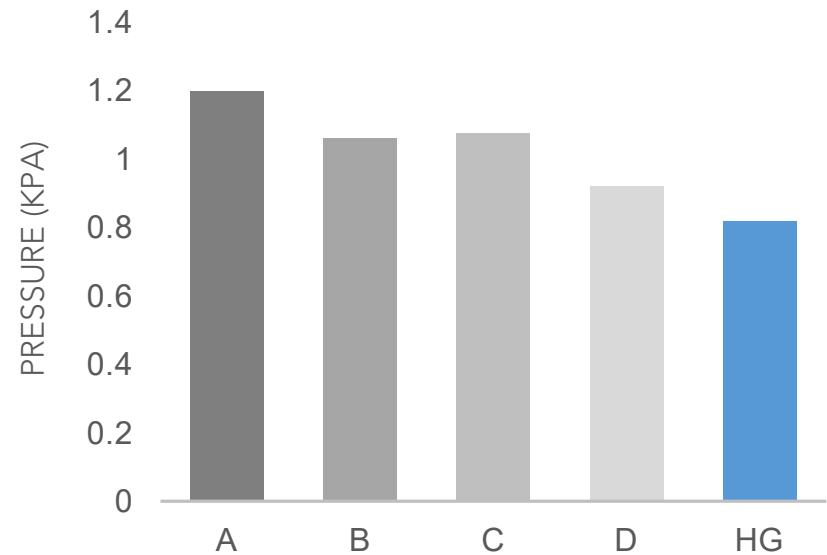


Envelopment refers to how well the support surface conforms to the contours of the body. High levels of envelopment allow for better pressure redistribution.

Envelopment Area (75n Load)



Interface Pressure (45% Compression)

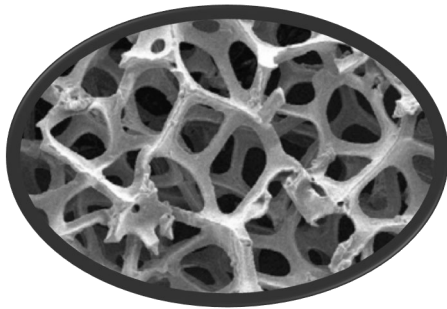


Envelopment
Profile



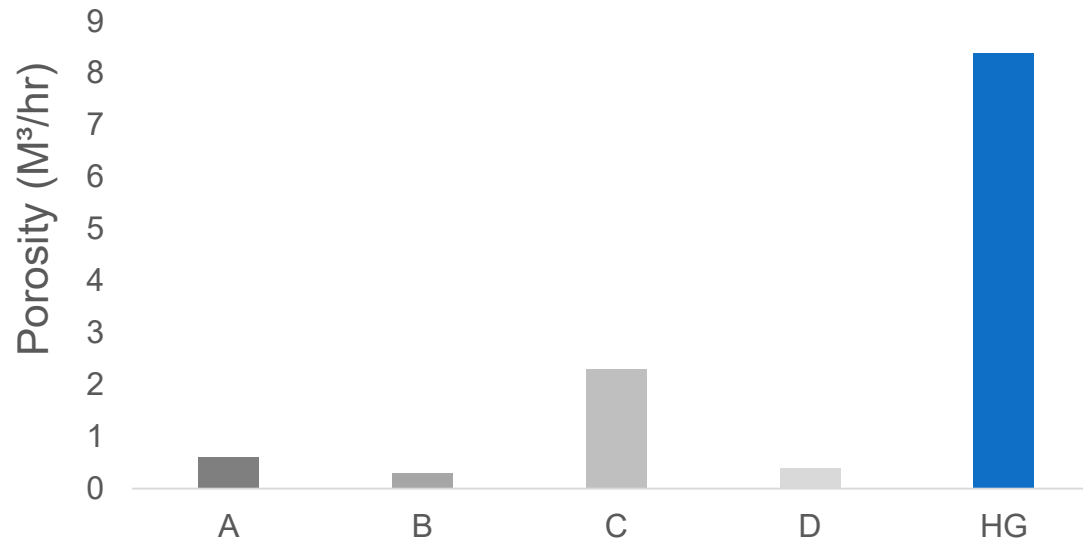


CELL STRUCTURE



Porosity is measured by placing a sample onto vacuum and testing the pressure differential between the low pressure and atmospheric pressure sides. A higher porosity indicates a more breathable foam.

Porosity (AS 2282)

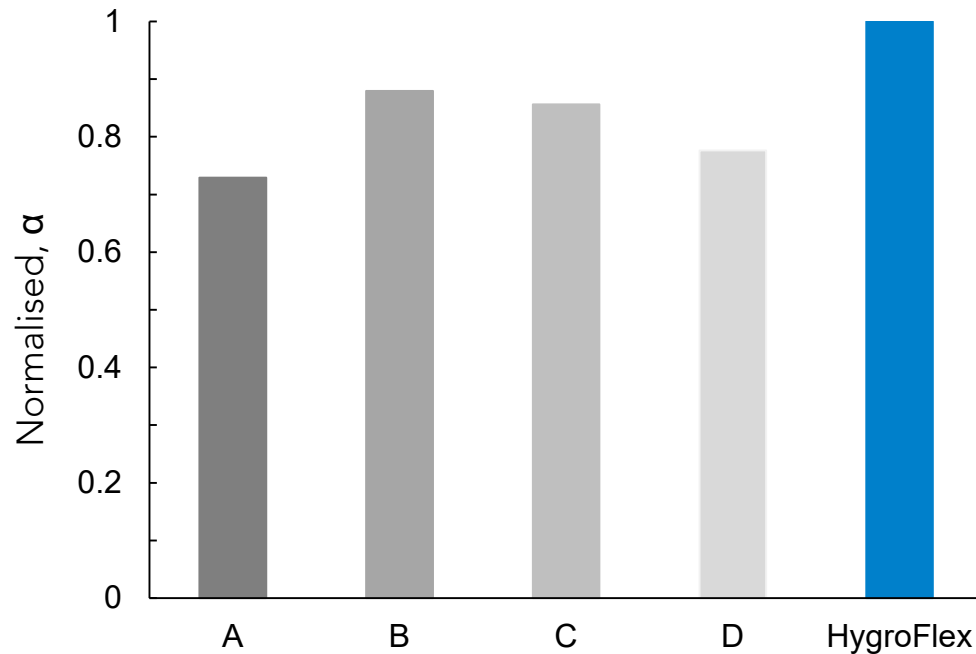




HEAT DISSIPATION

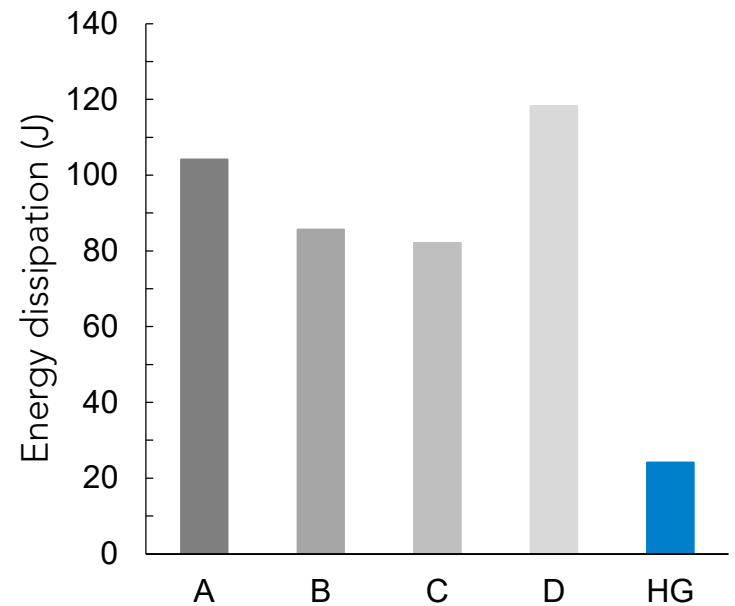
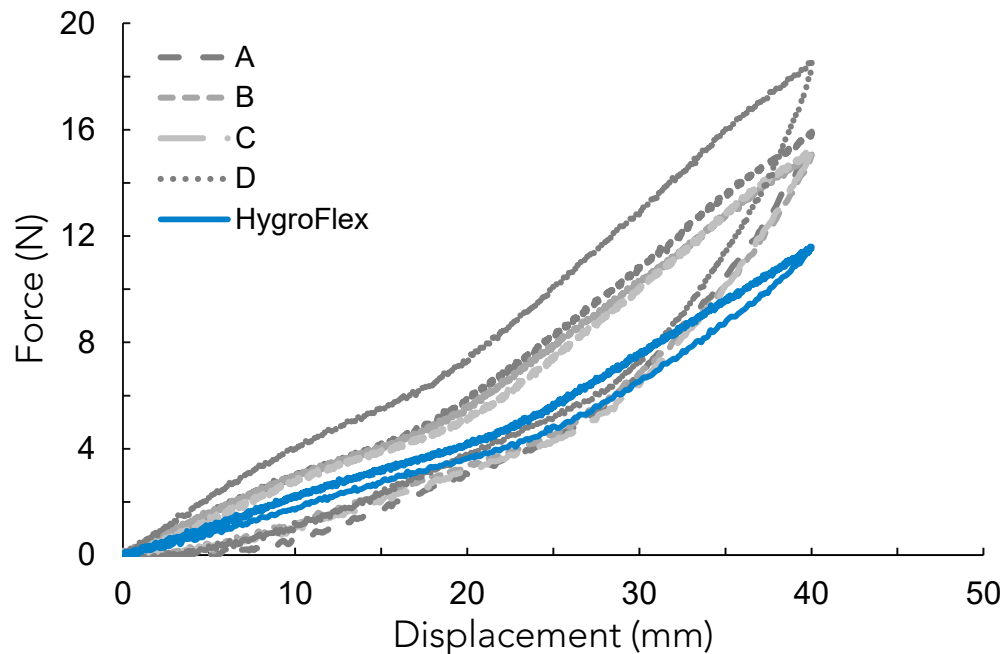
$$\alpha = \frac{k}{\rho C_p}$$

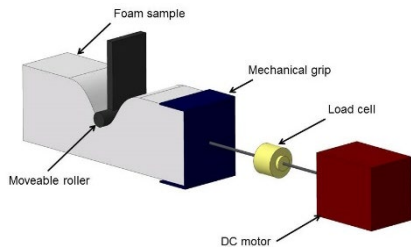
Thermal diffusivity (α) measures the rate of heat transfer of a material from the hot side to the cold side. In a material with high thermal diffusivity, heat transfers rapidly through it.



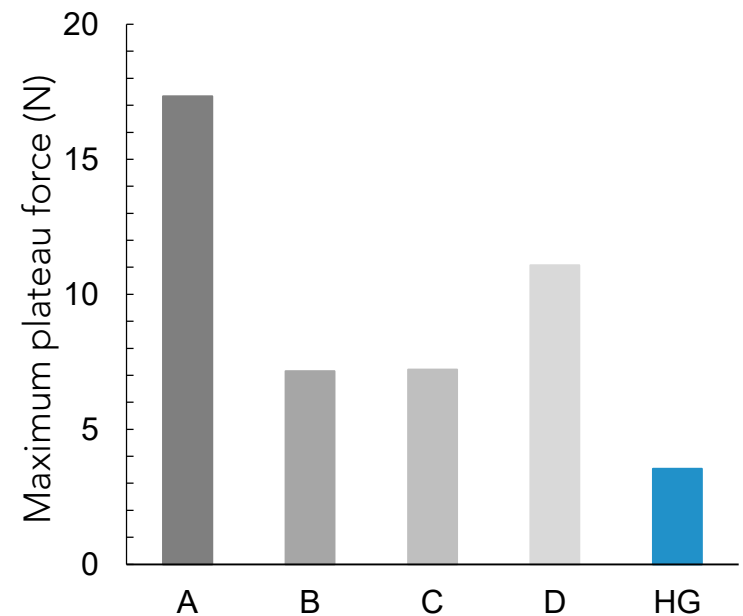
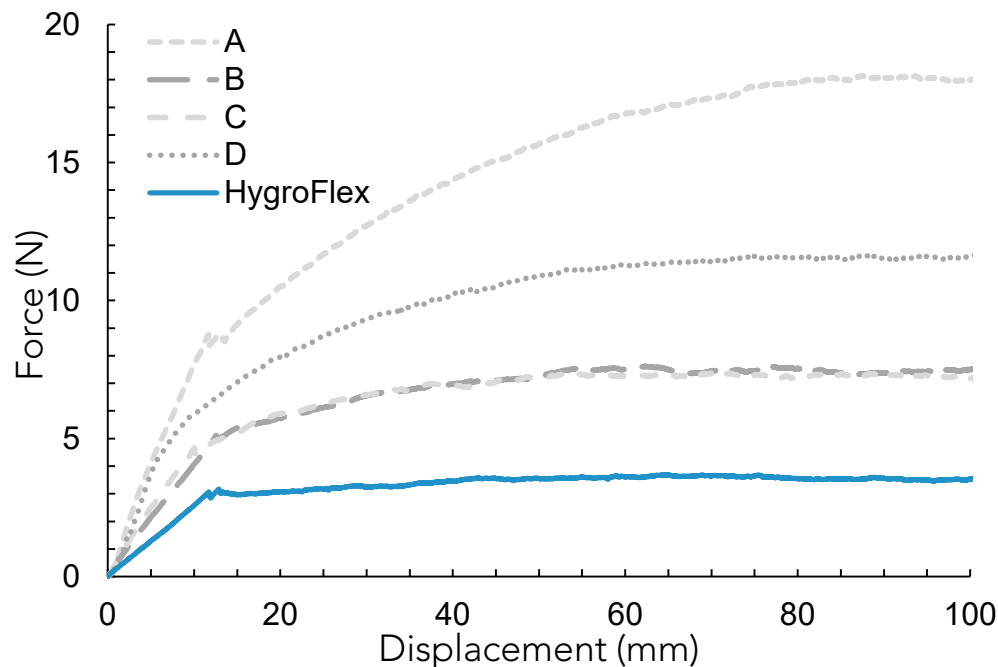
LOW HYSTERESIS

Hysteresis loss refers to the difference in energy between the loading phase and the unloading phase. Low hysteresis foams are linked to higher comfort levels and improved sleep efficiency.





Completing a full rotation on Hygroflex requires less force than on traditional memory foam. Low resistance to rolling motions reduces frictional force on the skin.





The GECA ecolabel is only awarded to products that have the highest environmental credentials and represent the leading environmentally preferable options in the marketplace.
100% of Joyce foams are GECA certified.



Joyce foams have been independently certified as free of harmful substances according to the strict global criteria of STANDARD 100 by OKEO-TEX.
100% of Joyce foams are Okeo-Tex Standard 100 certified.

CompriShield™ 
POWERED BY FRESCHE

CompriShield is a sustainable, bio-based microbial control solution that delivers effective protection against mould, mildew, dust mites and odour.

All Joyce comfort foams are infused with CompriShield during the manufacturing process.

Joyce 