



# **OpenCellMat**

#### NEW TECHNOLOGY TO PRODUCE LOW-DENSITY OPEN-CELL CROSSLINKED FOAMS USING BATCH AND CONTINUOUS PROCESSES

# **KEY ASPECTS**

- NEW MATERIALS WITH SIMILAR PROPERTIES TO THAT OF FLEXIBLE POLYURETHANE BUT BASED ON A POLYOLEFIN MATRIX (PE, EVA, EBA, BLENDS, ETC).
- DIFFERENT GRADES DEPENDING ON FOAM DENSITY AND TORTUOSITY OF CELLULAR STRUCTURE.

DENSITY	15-60 kg/m <sup>3</sup>
POLYMERS	Polyolefins and blends (LDPE, EBA, EVA,)
CELLULAR STRUCTURE	100 % Open cell structure. Hybrid-like structures Low and high tortuous structures.
PHYSICAL PROPERTIES	<ul> <li>High acoustic absorption.</li> <li>High oil absorption, negligible water absorption. Selective-like materials.</li> <li>Excellent cushioning capabilities.</li> <li>High thermal insulation ability.</li> </ul>

Elevated energy absorption in impacts.

Thermoformable using conventional

(either closed or open cell).

Possibility to laminate with other products

Some specific properties such as high oil

absorption at low frequencies, strain-rate

dependent mechanical performance.

absorption (40 g/g), high acoustic

- Low thermal expansion.
- Strong damping of vibrations.



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### **ADVANTAGES**

- Polyolefin-based: Isocyanate-free, low VOC.
- Production facilities: Same as for the closed cell counterparts.
- Higher resistance to moisture and chemical compounds.
- Lower costs of raw materials.

## **POTENTIAL APPLICATIONS**

- Automotive seats
- Cushions
- Clothes
- Mattresses
- Seals

- Acoustic absorbers
- Body protection in sports
- Vibration-dampening elements
- Absorbing elements in hygiene products
- Oil absorbers

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