

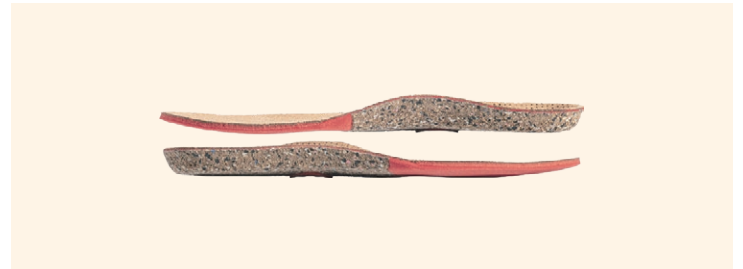
# FOOTWEAR

# EVOLUTION

## Material Description And Process Recommendation



**Evolution** is a cork and recycled EVA and PU foam material, agglomerated with a polyurethane binder, specially formulated to allow the possibility of thermoforming in typical thermoforming processes such as those used in insole production and molded orthopedic components. The material is multicolor, color variation can occur without impact on the material properties.



### Material Description

Available format	Sheets: 2 to 10 mm <sup>(1)</sup>
	Rolls: 2 to 10 mm <sup>(1)</sup>
Material	Cork recycled EVA agglomeration
Color	Brown with diverse colors of EVA
Density (kg/m <sup>3</sup> )	250–320
Hardness (Shore A)	25–50
Other characteristics	<ul style="list-style-type: none"><li>• PVC free</li><li>• Latex free</li><li>• Formaldehyde free</li><li>• 100% Vegan (cork and EVA only)</li><li>• 100% recyclable</li></ul>

<sup>(1)</sup> Other thickness only under request.



### Process Recommendations

(2)

Thermoforming process recommendation  
**Mechanical and vacuum (membrane) Thermoforming**

## Material Reception And Preparation

- Material should be unpacked at least 2 hours prior to heating and molding; maintaining a stable environment.
- Precutting forms/pieces recommended for a better material optimization and molding results.

## Molding Process

- Deep drawing and sharp edges caution should be taken at material above 3mm thickness.
- Multilayer combinations or piling (with other materials) follow standard practices.
- Material should be inserted in the heating chamber (oven), at temperatures between 140-180 °C, for a time period ranging from 30s to 1min depending on material thickness, size and component design.
- Molding time should be defined based on component complexity size, thickness and mold temperature. Typically refrigerated mold result in lower cycle times (within seconds).
- Demold and trim according to custom practices.

<sup>(2)</sup> These conditions are indicative and should be adjusted for customer process.



## Negative Carbon Balance

Footcork® Evolution has a negative carbon balance of  $-8,2 \text{ kg CO}_2/\text{m}^2$ , when considering the  $\text{CO}_2$  sequestration of the cork oak forest and the  $\text{CO}_2$  emissions associated with the industrial process.

- Emits up to **6 times less GHG** than average PU foams
- Consumes up to **3 times less energy** than average PVC materials
- Consumes up to **8 times less resources** than average EVA foams

\* According to EY 5154 Evolution Carbon Footprint Analysis, 2020



The data provided in this Material Data Sheet represents typical values. This information is not intended to be used as a purchasing specification and does not imply suitability for use in a specific application. Failure to select the proper sealing product may result in either product damage or personal injury. Please contact Amorim Cork Composites regarding recommendations for specific applications. Amorim Cork Composites expressly disclaims all warranties, including any implied warranties or merchantability or of fitness for a particular purpose. Amorim Cork Composites is not liable for any indirect, special, incidental, consequential, or punitive damages as a result of using the information listed in this material data sheet, any of its brochures, its products or any future use or re-use of them by any person or entity. For contractual purposes, please request our Product Specifications Sheet (PDA).

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