

# CHARACTERISTICS

## Cork, an amazing natural product

The bark of the cork oak tree has a unique honeycomb structure composed of tiny cells filled entirely with air. The properties of cork derive naturally from the structure and chemical composition of the extremely strong and flexible membranes, which are also waterproof and airtight. Each cubic centimetre of cork's structure contains between 30 and 40 million cells.

Some of cork's most unique and useful characteristics are:

### **Lightness:**

Around 80% of the cork volume consists of gaseous matter, which makes cork extremely light and buoyant.

### **Elasticity and Resiliency:**

The cellular membranes are very flexible, making the cork both compressible and elastic. These characteristics, together with other qualities, largely explain how cork has become indispensable for stoppers manufacturing.

When cork is subjected to strong pressure the gas in the cells is compressed and reduces considerably in volume. When released from pressure cork immediately recovers its original volume.

### **Impermeability:**

The presence of suberin (a complex mixture of fatty acids and heavy organic alcohol) renders cork impermeable to both liquids and gases. As a result it does not rot, and may therefore be considered one of the best seals available.

### **Insulation:**

Cork has one of the best insulating capacities, thermal and acoustical, of all natural substances. This is due to the fact that the gaseous elements are sealed in tiny, impermeable compartments, insulated one from the other by a moisture resistant material.

**Fire retardant:**

Cork is a natural fire retardant as it does not spread flames and does not release toxic gases during combustion.

**Durability:**

Cork is also remarkably resistant to wear and has a high friction coefficient. Thanks to the honeycomb structure, it is less affected by impact and friction than other hard surfaces.

**Hypoallergenic:**

Cork does not absorb dust and, consequently, does not cause allergies nor pose a risk to asthma sufferers.

**Biodegradable, recyclable and renewable:**

Cork is a natural raw material which is 100% biodegradable, recyclable and renewable.