

MecCarbon.C5

The Graphite technology

The hard carbon that changed the history of Meccanotecnica Umbra In the Industrial, Automotive, and Household Appliance Fields

MTU MecCarbon C5 embodies over three decades of material development at Meccanotecnica Umbra, with proven applications across industrial, automotive, and household appliance sealing systems.

Developed to ensure reliability and long service life in mechanical seals, MecCarbon C5 delivers consistent performance even in operating environments where most commercially available carbon grades fail to do so, such as in the presence of contaminated fluids.

Engineered to exceed the limits of traditional carbons, MecCarbon C5 combines high wear resistance with full safety for applications in contact with potable water, offering a dependable and versatile solution across a wide range of operating conditions.

KEY POINTS

Sustainable

Stable

Chemical Resistant

Compatible with Potable Water

KEY ADVANTAGES



Sustainability:

Unlike resin-impregnated carbons, MecCarbon C5 contains no phenolic resins and requires no pitch or tar during production. This results in a cleaner manufacturing process, a more durable and stable material, making it the preferred choice for customers with a strong focus on environmental sustainability.



Stability:

Resin-free carbon structure, sintered at 900 °C, ensuring long-term stability with reduced aging effects. This structure minimizes performance degradation and significantly lowers the risk of fluid contamination. Laboratory tests show MecCarbon C5 delivers up to 100% higher wear resistance compared to conventional resin-impregnated carbons.



Chemical Resistance:

High chemical inertia makes MecCarbon C5 suitable for aggressive and contaminated fluids, delivering stable and predictable performance throughout its service life.



Potable Water Compatibility:

Compliant with the main requirements for drinking water applications (WRAS, ACS, FDA CFR Title 21, KTW), MecCarbon C5 is suitable for use in civil and industrial pumps and water circuits.

Get technical support

OUR DIFFERENCE

Unlike most market players, Meccanotecnica Umbra designs and manufactures its sliding surfaces entirely in-house. From the formulation of the carbon powder compounds to the definition of processes and sintering parameters, every step is engineered internally and validated through advanced testing capabilities.

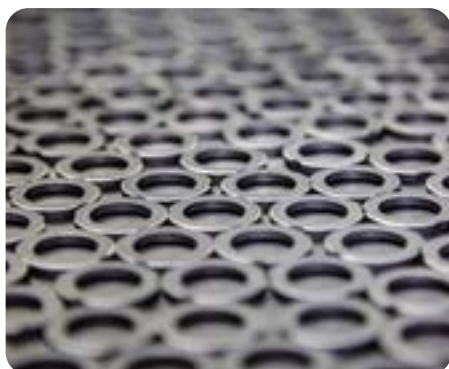
This integrated approach allows us to tailor sliding surfaces precisely to the operating conditions and to the mechanical seal design itself—making them a core, purpose-built component of our sealing systems, rather than a standard material sourced from the market.

The new MecCarbon and MecSilicon families further expand Meccanotecnica Umbra's advanced sliding surface portfolio. These solutions complement the well-established Mecflon range, which—particularly in its Y1 and Y4 grades—represents the global benchmark for PTFE sliding surfaces used in mechanical seals.

MecCarbon.
The Graphite Technology

Mecflon.
The PTFE Technology

MecSilicon.
The SiCTechnology



**Meccanotecnica
Umbra**

a Story of Excellence

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