NEXIPAL® SILICONE LAMINATES - POWERFUL PERFORMANCE - LAYER ON LAYER

Medical technology, robotics, automotive engineering, artificial muscle: in all of these fields, electroactive silicone laminates open up fascinating opportunities for innovative applications in actuator and sensor technology. WACKER's NEXIPAL ® laminates are the first ready-to-use silicone laminates with electro-active properties and will be available on the market from 2023 onwards.

Advantages

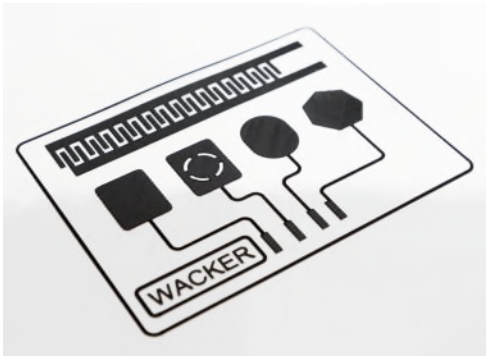
- Low energy consumption
- Flexible and elastic
- Large strokes, high actuation speed
- Low weight, silent operation
- Proportional switching
- Actuator-sensor combinations possible

NEXIPAL® Sense – Feeling for Intelligent Sensors

Intelligent sensors showcase the potential of NEXIPAL® Sense laminates. Every mechanical influence changes the electrical capacity of the laminate, making it possible to record expansion and compression movements. Touchscreens equipped with NEXIPAL® can use vibrations and haptic signals, for instance, to simulate keys that can be recognized and operated by touch alone and without eye contact.

NEXIPAL® Act – Strength for Actuators

In actuator applications, laminates made with NEXIPAL® Act convert electrical energy into mechanical work. Each layer of the film is embedded between two flexible electrodes. When voltage is applied the electrodes attract each other. This causes the silicone film between them to change its shape, becoming not only thinner, but also longer and wider, and causing the surface to expand in proportion to the compressive force. When uncharged, the high elastic recovery of these films ensures that the laminate will return to its original shape – a process that can be repeated indefinitely.



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