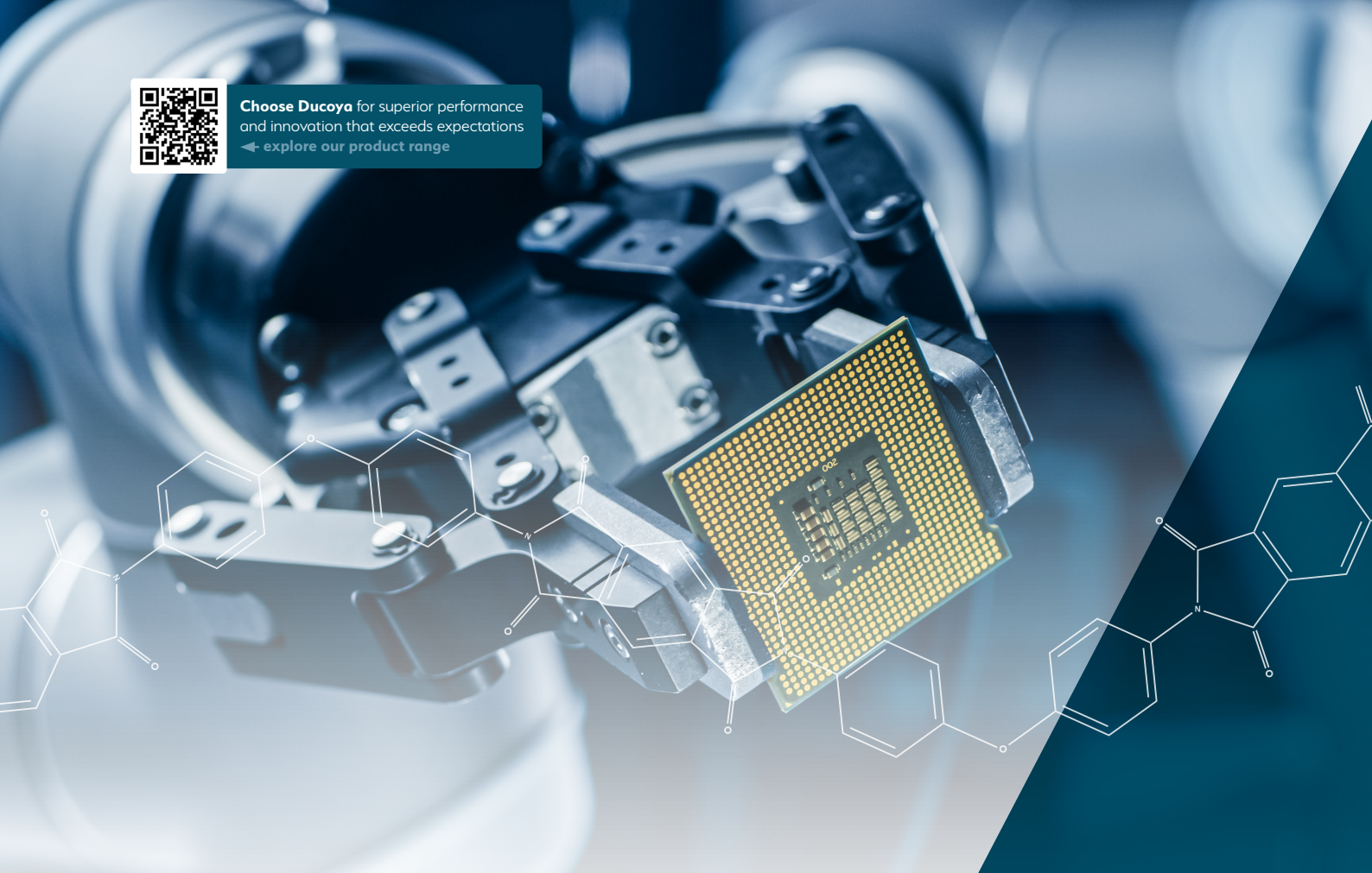




Choose **Ducoya** for superior performance and innovation that exceeds expectations
 ← explore our product range



Duvelco

Specialist Polyimide Polymers

Solutions for Critical and Demanding Applications



High Purity



Plasma Resistant



Ultra Low Outgassing



Bringing together high purity, plasma resistance and dimensional stability without outgassing even in an ultra-hard vacuum.

DUCOYA[®]

FOR END EFFECTORS

DUCOYA®

Specialist Polyimide Polymers For Semiconductor End Effectors

End effectors, also known as end-of-arm tools, are devices attached to the end of robotic arms or manipulators and used during minimal contact air-flow holding (Bernoulli effect) or 'gentle' physical contact operations. These tools allow for safely and efficiently handling semiconductor components, which may be at elevated temperatures as they pass from operation to operation or tool to tool. End effector operations must not mechanically damage the wafer or introduce contaminants that may interfere with the electronic circuits.

Each of the many individual steps required to create electronic system devices, including multiple wafer handling procedures, is not without its risks. Wafers resting on insulating materials within robotic handling systems can quickly become charged surfaces. These charges can lead to Electrostatic Discharge (ESD) events or attract potentially damaging particles.

Duvelco has created a range of polyimide polymer resins that combine plasma resistance, exceptionally high purity, minimal outgassing in hard vacuum conditions, excellent elastic recovery and toughness, and favourable electrostatic discharge surface resistance values. These features, retained even at high temperatures up to 400°C in a vacuum, make Ducoya the ideal choice for wafer handling in electronic system device manufacturing.

Ducoya is 'soft but strong', holding wafers conformably but firmly, significantly reducing the risk of damage. It can be easily machined to extremely tight tolerances, and its variants offer either excellent electrical insulation properties; as in Ducoya G001 UP or electrostatic discharge characteristics as in Ducoya G201 ESD or conductive characteristics as in Ducoya G202 C. This can ensure layers of safety for wafers during fabrication. For example; even if the Bernoulli effect is lost on an effector, leading to a 'touch down' of the wafer onto the pads.

Ducoya parts maintain performance over frequent use thanks to their exceptional wear-resistant nature. This durability, combined with their high purity, significantly reduces the generation of particulates that may contaminate other surfaces or wafers. This ensures the security of your manufacturing process and offers a long-term investment that will continue to deliver value over time.



G001 UP

100% unfilled PMDA-ODA produced on a dedicated line, delivers ultra-purity for demanding applications where parts per billion levels of impurities are significant.



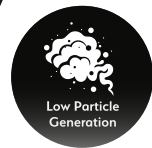
G201 ESD

High purity PMDA-ODA polymer combined with a proprietary filler to allow limited conductive capability allowing a gentle discharge of accumulated static electricity. For use where a discharge of static electricity is a significant process risk.



G202 C

High purity PMDA-ODA polyimide with a combination of proprietary fillers to allow electrical conductivity. Intended to prevent accumulation of static electricity where this is a significant process risk.



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Unlock Excellence
Ducoya by Duvelco
Redefining standards in
polyimide technology



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duvelco.com
info@duvelco.com