



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 Strength to Weight



Wide Temp Range



Thermal Oxidative Stability



Combining thermal oxidative stability with exceptional low wear and low friction and an excellent strength to weight ratio to provide long operational life of aerospace precision components.

DUCOYA[®]

IN AEROSPACE

DUCOYA®



G001

100% unfilled PMDA-ODA polyimide, specially formulated for balanced properties, static sealing and the highest physical strength.



G021

PMDA-ODA polyimide with 15% graphite encapsulated into the polymer. This combination is optimised for low wear and low friction tribological applications.



G022

PMDA-ODA polyimide with 40% graphite encapsulated into the polymer. Optimised for low thermal expansion and good thermal oxidative stability, combined with excellent wear and friction behaviour.

Specialist Polyimide Polymers

Ducoya delivers low wear and low friction in extreme temperatures. Its stability in hot, oxidising conditions, without the complications of a phase transition such as T_g , allows extended use of high-power settings without shortening part lifetime.

The material's 'soft but strong' character also allows good sealing of compressed air and other gases such as hydrogen, as well as hydraulic fluids.

Ducoya's moderate modulus helps effectively dampen vibrations, extending part life and reducing stress elsewhere in the engine.

Ducoya polyimide grades can be chosen with different levels of thermal expansion to best integrate with adjacent metallic components and can be manufactured to demanding tolerances. This combination of properties and an excellent strength-to-weight ratio means your engines can deliver maximum efficiency for extended periods of safe operation.

Ducoya delivers a coefficient of dynamic friction as low as 0.09 and a coefficient of static friction of 0.27 against hardened stainless steel unlubricated in air. These low coefficients of friction can improve responsiveness and keep the actuator's size and weight to a minimum. Low wear rates mean long component life and extended operating periods on the aircraft.

Ducoya is also compatible with various hydraulic and other aerospace fluids, including de-icing solutions and jet fuels.

ENGINE

- ● ● Variable Stator Vane
- ● ● Shroud
- ● ● Unison Ring Wear Pad
- ● ● Air Management Openings
- ● ● Fuel Valve
- ● ● Bumper

FLIGHT CONTROL SURFACES

- ● ● Flaps and Slats (Flaps and Droops)
- ● ● Ailerons, Elevators and Rudder(s)
- ● ● Air Brakes and Spoilers
- ● ● Radial & Axial Hydraulic Motors
- ● ● Axial Hydraulic Pumps

LANDING GEAR

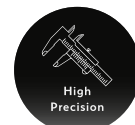
- ● ● Bearings and Bushes
- ● ● Damper Seals

CLAMPS AND FASTENERS

- ● ● Aerospace Fasteners (Lock Nuts and Screws)
- ● ● Fuel Line, Oil Line and Hydraulic Line Clamps

AUXILLIARY POWER UNIT

- ● ● Spline Coupling (also found on main engine)
- ● ● Constant Speed Drive (CSD)



Discover the pinnacle of polymer technology with our flagship product range, **Ducoya G series**. Meticulously researched, developed, and crafted to excel in high-performance, critical applications, Ducoya sets new industry standards.

Unlock Excellence
Ducoya by Duvelco
Redefining standards in
polyimide technology



Discover more about Ducoya

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