

TRANSPARENCY BULLETIN

COCKPIT WINDOWS

Airbus A318/319/320/321



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All Cockpit Windows

Features	Benefits
Herculite® II Chemically Strengthened Glass Structural Plies	<ul style="list-style-type: none"> • High strength-to-weight ratio • Chemical and abrasion resistance
S-123 Urethane Interlayer	<ul style="list-style-type: none"> • High resistance to moisture damage • Elasticity at low temperatures reduces delamination and cold chipping potential • Provides maximum adhesion to glass
PR-2060 Internal Moisture Seal	<ul style="list-style-type: none"> • Superior moisture barrier • Moisture absorption five to 10 times less • Moisture vapor transmission two to three times less • Environmentally friendly formulation
Stainless Steel Z-Retainer	<ul style="list-style-type: none"> • Permanent physical barrier protects sealant against moisture ingress
Nesatron® Anti-ice and Antifog Heating Systems	<ul style="list-style-type: none"> • Superior heat uniformity and optics
Full Interchangeability	<ul style="list-style-type: none"> • Reduced inventory and related costs • Ease of installation

Main Windshield

Features	Benefits
Thermally Tempered Glass Outboard Ply	<ul style="list-style-type: none"> • Chemical and abrasion resistance • High load-carrying capabilities
PR-1425CF Outboard Moisture Seal	<ul style="list-style-type: none"> • Chromate-free • Cures in less than half the time • Lower moisture vapor transmission
Robust Bus Bar System	<ul style="list-style-type: none"> • Improved interconnectivity with heating system coating • Relocated away from hump seal for better window visual inspection

Sliding and Fixed Aft Windows

Features	Benefits
Simplified Clamp Design	<ul style="list-style-type: none"> • Eases replacement
Separate Glass Panel and Frame	<ul style="list-style-type: none"> • Frame retainer can be reused • Allows for complete framed window replacement or window panel only • Better materials and costs management

PPG Aerospace – Transparencies is a leading and experienced source of original-equipment and replacement windshields and cockpit windows for Airbus airplanes. Using new, proprietary technologies, PPG has enhanced design of the windshields and cockpit windows for Airbus single-aisle aircraft to improve field performance, reduce maintenance downtime and related costs, and lessen the environmental impact of aging and removed transparencies.

A clamped design for the side cockpit windows allows the frame retainer and window panel to be installed as a complete assembly while being discrete components. Undamaged frame retainers can be reused when only window panels need to be replaced.

New and Repairs

Operators can buy new replacement windshields and side cockpit windows from PPG and enjoy the convenience and time savings of buying directly from a single source for their entire Airbus single-aisle jetliner fleet. PPG provides the latest engineering version so operators know they are flying the most reliable cockpit windows. New replacement windows are stocked at PPG worldwide depots or application support centers and shipped from stock within 24 hours.

PPG sliding and fixed aft cockpit windows are available as complete framed window assemblies or as window panels for installation into salvaged, undamaged frame retainers. This affords operators more flexibility and better materials usage for cost savings by being able to purchase window panel replacements only when reusing the frame retainers, or installation ease when complete framed window assemblies are needed.

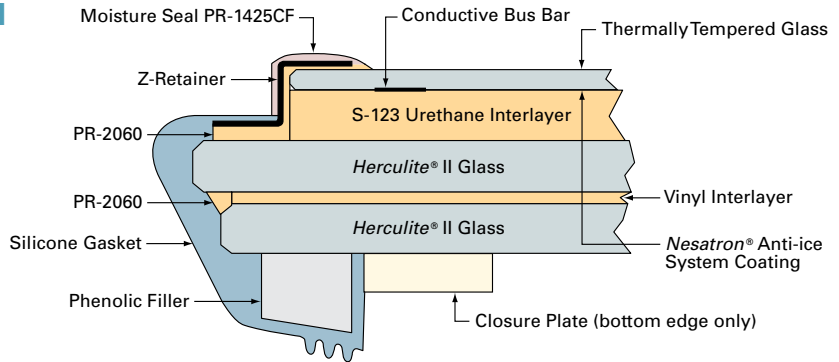
PPG's repair program provides optimum cost savings. Among the services offered for Airbus windshields and side cockpit windows are scratch removal, hump seal repair, terminal block repair, gasket remolding and *Surface Seal*® coating application. In addition, the number-two framed window assembly can be overhauled and repaired.

SURFACE SEAL® Coating

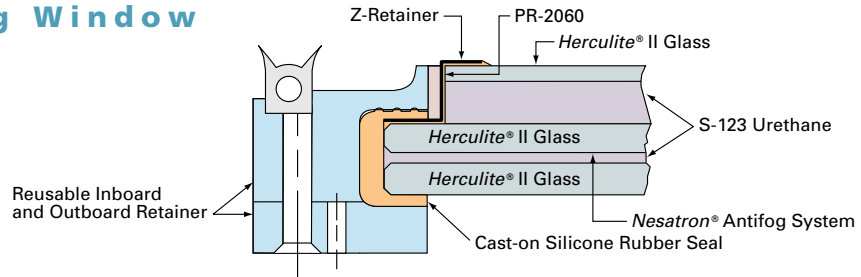
Surface Seal hydrophobic coating is available for application to all PPG windshields for the Airbus fleet to improve water shedding. When ordering spare PPG windshields for Airbus aircraft or having repairs made, ask for *Surface Seal* coating. The coating can be field applied to windshields on in-service aircraft with *Surface Seal* coating system kits.

Airbus A318/319/320/321

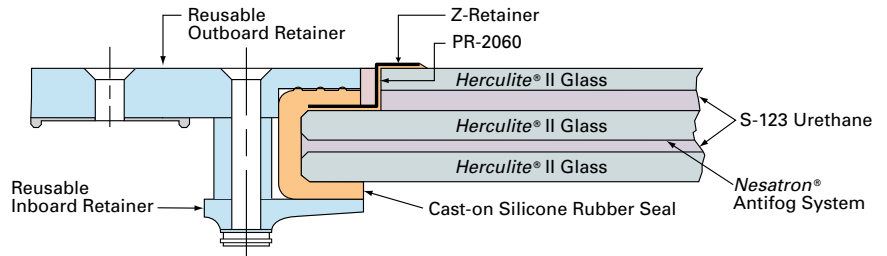
Main Windshield



No. 2 Sliding Window



No. 3 Fixed Aft Window



Part Numbers

Pilot Windshield.....	NP165331-1
Copilot Windshield.....	NP165331-2
Pilot Number-Two Sliding Cockpit Window	
Assembly.....	NP165332-1 (with Frame Retainer NP165332-5)
Window Panel.....	NP165332-3
Frame Retainer Kit.....	NP165332-5
Copilot Number-Two Sliding Window	
Assembly.....	NP165332-2 (with Frame Retainer NP165332-6)
Window Panel.....	NP165332-4
Frame Retainer Kit.....	NP165332-6
Pilot Number-Three Fixed Aft Window	
Assembly.....	NP165333-1 (with Frame Retainer NP165333-5)
Window Panel.....	NP165333-3
Frame Retainer Kit.....	NP165333-5
Copilot Number-Three Fixed Aft Window	
Assembly.....	NP165333-2 (with Frame Retainer NP165333-6)
Window Panel.....	NP165333-4
Frame Retainer Kit.....	NP165333-6

Stocks Worldwide

PPG maintains inventories of cockpit windows for all Airbus airplanes at its depots in Huntsville, Ala., U.S.A., and Amsterdam, the Netherlands; and at its application support centers in Dubai, United Arab Emirates; Melbourne, Australia; and Singapore.

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Additional Information

Details on pricing, warranty, delivery, turn time and return procedures are available from your PPG Aerospace – Transparencies sales or customer service representative.

For the PPG Aerospace transparencies sales office or application support center nearest you, please visit our website at www.ppgaerospace.com.



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