

# TECHNICAL DATA

## COCKPIT WINDOWS Airbus A318/319/320/321



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PPG Aerospace is a leading and experienced source of original-equipment and replacement windshields and side cockpit windows for the Airbus A320 single-aisle jetliner family. Using new, proprietary technologies, PPG has enhanced the design of the windshields and side cockpit windows 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.

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.

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

PPG's repair program provides optimum cost savings. Services for windshields and side cockpit windows include scratch removal, hump seal repair, terminal block repair, gasket remolding and *Surface Seal*® coating application. In addition, the No. 2 framed window assembly can be overhauled and repaired.

### SURFACE SEAL® Coating

*Surface Seal* hydrophobic coating improves water shedding on PPG glass-faced windshields. When ordering spare PPG windshields 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.

### All Cockpit Windows

#### Features

Herculite® II Chemically Strengthened Glass Structural Plies

Urethane Interlayer

PR-2060 Internal Moisture Seal

Stainless Steel Z-Retainer

Nesatron® Anti-ice and Antifog Heating Systems

Full Interchangeability

#### Benefits

- High strength-to-weight ratio
- Chemical and abrasion resistance

- Provides maximum adhesion for resistance to delamination and extends service life
- Elasticity at low temperatures reduces potential for delamination and cold chipping

- Superior moisture barrier
- Moisture absorption five to 10 times less
- Moisture vapor transmission two to three times less
- Environmentally friendly formulation

- Permanent physical barrier protects sealant against moisture ingress

- Superior heat uniformity and optics

- Reduced inventory and related costs
- Ease of installation

### Main Windshield

#### Features

Thermally Tempered Glass Outboard Ply

PR-1425CF Outboard Moisture Seal

Robust Bus Bar System

#### Benefits

- Chemical and abrasion resistance
- High load-carrying capabilities

- Chromate-free
- Cures in less than half the time
- Lower moisture vapor transmission

- Improved interconnectivity with heating system coating
- Relocated away from hump seal for better window visual inspection

### Sliding and Aft Fixed Windows

#### Features

Simplified Clamp Design

Separate Glass Panel and Frame

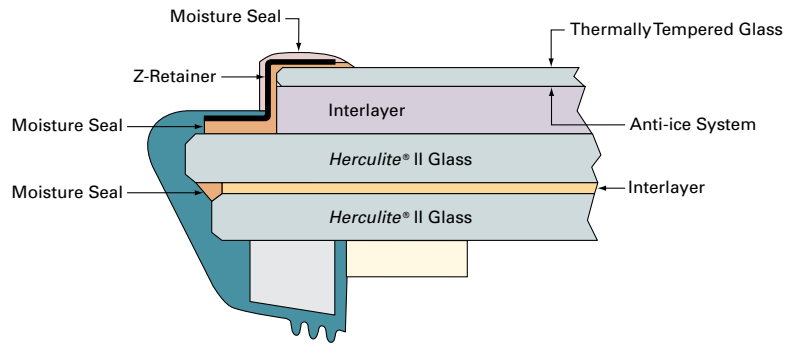
#### Benefits

- Eases replacement

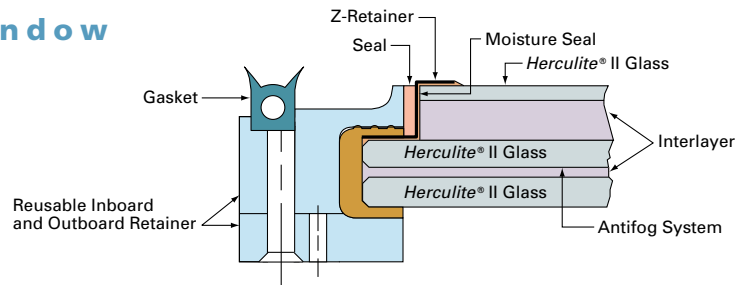
- Frame retainer can be reused
- Allows for complete framed window replacement or window panel only
- Better materials and cost management

# AIRBUS A318/319/320/321

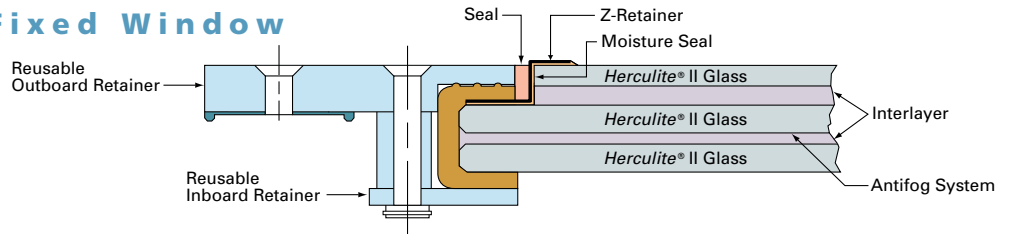
## Main Windshield



## No. 2 Sliding Window



## No. 3 Aft Fixed Window



### Part Numbers

<b>Pilot Windshield</b> .....	NP165331-1
<b>Copilot Windshield</b> .....	NP165331-2
<b>Pilot Number-Two Sliding Window</b>	
Assembly .....	NP165332A1
Window Panel .....	NP165332B1
Frame Retainer Kit .....	NP165332C1
<b>Copilot Number-Two Sliding Window</b>	
Assembly .....	NP165332A2
Window Panel .....	NP165332B2
Frame Retainer Kit .....	NP165332C2
<b>Pilot Number-Three Aft Fixed Window</b>	
Assembly .....	NP165333A1
Window Panel .....	NP165333B1
Frame Retainer Kit .....	NP165333C1
<b>Copilot Number-Three Aft Fixed Window</b>	
Assembly .....	NP165333A2
Window Panel .....	NP165333B2
Frame Retainer Kit .....	NP165333C2
<b>Hump Seal Repair Kit</b> .....	HSKAIRBUS

### Stocks Worldwide

With inventories of cockpit windows maintained worldwide, PPG is able to service customers from global stocking locations.

### Ordering Information

Orders may be placed through PPG Aerospace's worldwide network of application support centers (ASCs). For the ASC nearest you, visit [www.ppgaerospace.com](http://www.ppgaerospace.com).

In North America, call toll-free +1 (800) AEROMIX.

Pricing, warranty and delivery details are available from your PPG Aerospace sales representative.



**PPG Aerospace**  
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