# Technical Data Sheet Aerospace Transparencies



# Cockpit windows for Airbus A320 Family (all CEO and NEO models)



@AIRBUS -computer graphic by i3m

PPG's aerospace business is a leading and experienced source of original equipment, 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	Benefits
Herculite® II chemically strengthened glass structural plies	High strength-to-weight ratio     Chemical and abrasion resistance
Urethane interlayer	Provides maximum adhesion for resistance to delamination and extends service life.  Elasticity at low temperatures reduces potential for delamination and cold chipping
PR-2060 internal moisture seal	Superior moisture barrier     Moisture absorption five to 10 times less     Moisture vapor transmission two to three time less     Environmentally friendly formulation
Stainless steel Z-retainer	Permanent physical barrier protects sealant against moisture ingress
Nesatron® anti-ice and antifog heating systems	Superior heat uniformity and optics
Full interchangeability	For use on all A318, A319, A320, and A321 aircraft models     Reduced inventory and related costs     Ease of installation

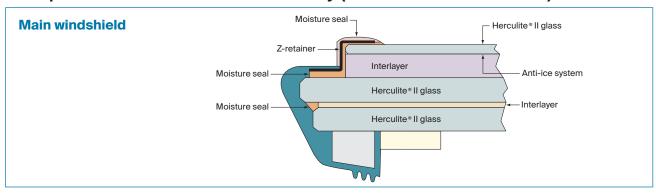
## **Main windshield**

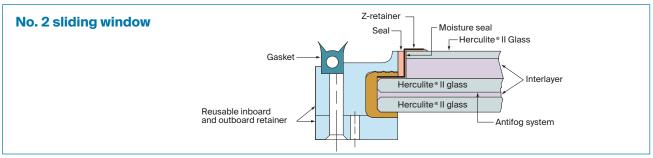
Features	Benefits
Excellent reliability	No heating system failures reported since introduction in 2010
PR-1425CF outboard moisture seal	Chromate-free Cures in less than half the time Lower moisture vapor transmission
Robust bus bar system	Improved interconnectivity with heating system coating     Relocated away from hump seal for better window visual inspection

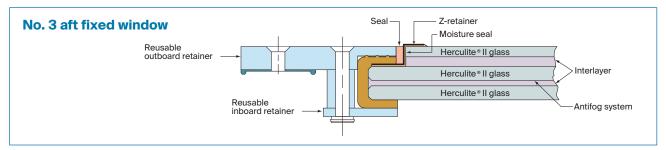
# Sliding and aft fixed windows

Features	Benefits
Simplified clamp design	Eases replacement
Separate glass panel and frame	Frame retainer can be reused     Allows for complete framed window replacement or window panel only     Better materials and cost management

# Cockpit windows for Airbus A320 Family (all CEO and NEO models)







Part numbers	
Pilot windshield	NP165331-1
Copilot windshield	NP165331-2
Pilot number-two sliding window assembly	NP165332B1
Copilot number-two sliding window assembly	NP165332B2
Pilot number-three aft fixed window assembly	NP165333B1
Copilot number-three aft fixed window assembly	NP165333B2 NP165333C2

#### 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's worldwide network of aerospace application support centers (ASCs). For the ASC nearest you, visit 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 Industries, Inc. 1719 US Highway 72 East Huntsville, Alabama 35811 USA Telephone +1 (256) 851-7001

Sierracin/Sylmar Corp. 12780 San Fernando Road Sylmar, California 91342 USA Telephone +1 (818) 362-6711

Ampaspace S.r.L. Via Delle Tre Venezie, 10 26010 Casaletto Vaprio (CR), Italy Telephone +39 0373 272 011

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