# Technical Data Sheet

# Transparencies



# Cockpit windows 747–100/200/300/400 airplanes



™ & © The Boeing Company. Used under license.

#### **Description**

PPG's aerospace business is a leading and experienced source for original-equipment and replacement windshields and side cockpit windows for airplanes produced by The Boeing Company. As the sole manufacturer of original-equipment cockpit windows for 747-100/200/300/400 airplanes, PPG is the only supplier able to provide the latest enhancements for replacement windshields and glass or lightweight glass-faced acrylic side cockpit windows.

Operators know that PPG transparencies have outstanding service life, as shown in PPG in-service reliability studies. The PPG main windshield for the 747 is the most reliable windshield made today and sets the standard against which all other windows are measured.

PPG offers two designs for the No. 2 and No. 3 side cockpit windows for the 747: all-glass and lightweight glass-faced acrylic windows. The lightweight glass-faced acrylic configuration is a variant of the original cockpit window with proven reliability and offers weight savings of up to 37 pounds.

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 fleet of airplanes produced by The Boeing Company.

#### Main windshield

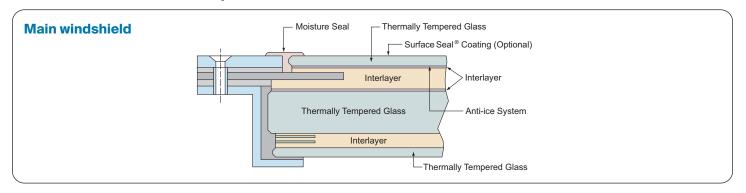
Features	Benefits	
Center structural glass ply with external and internal nonstructural glass plies	<ul> <li>Encapsulation of structural ply protects the windshield from structural damage</li> </ul>	
Thin thermally tempered potential glass inboard ply	<ul> <li>Acts as a barrier to eliminate for glass particles to fly off into the cockpit in the event of a bird strike</li> </ul>	
Triple fail-safe conditions	<ul> <li>Passes fail-safe pressure test with all glass plies broken</li> <li>Cold dispatch of aircraft in with window heat nonfunctional</li> </ul>	
Urethane interlayer	<ul> <li>Provides maximum adhesion for resistance to delamination and extends service life</li> <li>Elasticity at low temperatures reduces potential for delamination and cold chipping</li> </ul>	
Nesatron <sup>®</sup> anti-ice system	Superior heat uniformity and optics	

### No. 2 and No. 3 side cockpit windows

Features	Benefits
Two robust design options	<ul> <li>All-glass cross section proven on many other aircraft programs</li> <li>Lightweight glass-faced acrylic configuration has flown on 747 since 1983</li> </ul>
Outboard glass ply	Chemical and abrasion resistance
Two structural plies	Both are fail-safe for pressurization load
Lightweight	Significant weight savings compared with previous configurations
Urethane interlayer	<ul> <li>Provides maximum adhesion for resistance to delamination and extends service life</li> <li>Elasticity at low temperatures reduces potential for delamination and cold chipping</li> </ul>
Antifog systems	Superior heat uniformity and optics
Full interchangeability	<ul><li>Designed for use on all 747 models</li><li>Reduced inventory and related costs</li></ul>

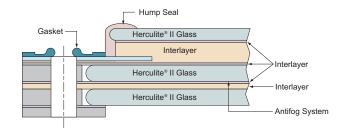
# **Cockpit windows**

## 747-100/200/300/400 airplanes

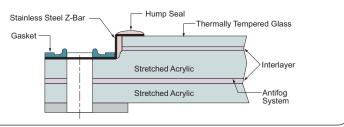


# No. 2 and No. 3 side cockpit windows

#### Glass



## Lightweight glass-faced acrylic



#### **Part numbers**

#### Pilot Windshield

With Surface Seal Coating	60P10029 11
Without Surface Seal Coating	
With Surface Seal Coating (ramp and handle,	
new terminal block)	
With Surface Seal Coating (new terminal block)	60B10028-27
Copilot Windshield	
With Surface Seal Coating	60B10028-12
Without Surface Seal Coating	60B10028-6
With Surface Seal Coating (ramp and handle, new terminal block)	60B10028-24
With Surface Seal Coating (new terminal block)	
Pilot No. 2 Side Cockpit Window	
Glass	141U4822-11
Lightweight Glass-Faced Acrylic	141500-13
Copilot No. 2 Side Cockpit Window	
Glass	
Lightweight Glass-Faced Acrylic	141500-14
Pilot No. 3 Side Cockpit Window	
Glass	141U4832-11
Lightweight Glass-Faced Acrylic	
Copilot No. 3 Side Cockpit Window	
Glass	141U4832-12
Lightweight Glass-Faced Acrylic	141600-14
Hump Seal Repair Kit	HSKBOEINGWB

NOTE: Rebuilt windshields and overhauled acrylic cockpit windows are manufactured to the latest design approved by The Boeing Company and supplied with the latest part numbers. PPG and Sierracin/Sylmar rebuild all prior configurations (dash numbers and revision letters).

Herculite, Nesatron and Surface Seal are registered trademarks of PPG Industries Ohio, Inc.

# All recommendations, statements, and technical data contained herein are based on tests we believe to be reliable and correct, but accuracy and completeness of said tests are not guaranteed and are not to be construed as a warranty, either expressed or implied. User shall rely on his own information and tests to determine suitability of the product for the intended use and assumes all risks and liability resulting from his use of the product. Seller's and manufacturer's sole responsibility shall be to replace that portion of the product of this manufacturer which proves to be defective. Neither seller nor manufacturer shall be liable to the buyer or any third person for any injury, loss, or damage directly or indirectly resulting from use of, or inability to use, the product. Recommendations or statements other than those contained in a written agreement signed by an officer of the manufacturer shall not be binding upon the manufacturer or seller.

This document has been reviewed by the PPG Aerospace Export Control Department and has been determined to contain only EAR99 controlled data.

# Surface Seal<sup>®</sup> coating system

Surface Seal coating system by PPG is the supplemental windshield rain removal system approved by The Boeing Company for 747 airplanes and is standard on the latest engineering version of PPG original-equipment and replacement windshields for them. Surface Seal hydrophobic coating improves the ability of the windshield to shed water, providing the ultimate in visibility for pilots during wet conditions. Surface Seal coating system kits are available for field application.

#### Stocks worldwide

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

#### **Ordering information**

Orders may be placed through PPG's worldwide network of 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 sales representative.

PRC-DeSoto International, Inc. 12780 San Fernando Road Sylmar, CA 91342 Telephone (818) 362-6711 Toll Free (800) AEROMIX www.ppgaerospace.com

Issue Date: 11/23 Supersedes: 1/14

Lit: 4846