

PS200

WATER REPELLANT

(HYDROPHOBIC)

GLASS COATING

PS200 PROVIDES SURFACES FOR:

OPTICAL FIBERS

Provides lubricity and reduces breakage during fabrication and operational flexing.

LABORATORY GLASSWARE

Improves drainage, reduces breakage.

FLUORESCENT LIGHT BULBS

Increases scratch resistance, reducing breakage and increases surface resistivity

CLINICAL ANALYSIS

Treatment of analytical equipment extends clotting time of blood.
Reduces hemolysis, reduces protein adsorption.

PS200 IS NOT FOR FOOD OR DRUG USE



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PS200

is a solution of t-butanol and diacetone alcohol which contains a monomeric octadecylsilane derivative that reacts with water to form a silanol rich prepolymer and an alcohol. This prepolymer condenses with available hydroxyl groups on glass (or other siliceous materials) to form a chemically bound alkylsilicone. Each liter of solution will coat approximately 250 m² of surface (600 15-cm test tubes or 80 1-L beakers).

PROPERTIES

% Active	20%
Color	Max 11 Gardner Scale
Flashpoint	10°C
Specific Gravity	0.88 @ 25°C
Solidification Point	-30°C

APPLICATION

1. Thoroughly clean surface with an alkaline detergent (used glass surfaces may require an immersion in 2 – 3% sodium hydroxide). All detergent must be removed prior to application
2. Using ordinary tap water, prepare a 1% PS200 solution (hard water is not acceptable).
3. Immerse the surface in the PS200 solution for 5 – 10 second, ensuring that all surfaces are wetted by the solution. Agitation of the solution generally results in more uniform deposition
4. After immersion, remove the surface from the solution and thoroughly rinse with water to remove excess PS200 from the surface

Cure the PS200 coating by bringing the surface temperature to 100°C for 3-5 minutes. Room temperature cure may be accomplished by air drying for 24 hours if relative humidity is 65% or less

SURFACE PROPERTIES

Values reported are for glass slides dipped in 1% solutions of PS200 cured at 100°C

Critical Surface Tension		Surface Resistivity	
Untreated	$\gamma_c = 78$ dynes/cm	Untreated	1×10^{12} ohms
Treated	$\gamma_c = 31$ dynes/cm	Treated	1.2×10^{13} ohms

Coefficient of Friction Static – Glass Slide on Glass Slide

Untreated	0.9 – 1.0
Treated	0.2 – 0.3

Blood Protein Adsorption – Comparative 100 hour adsorption value for whole human blood on borosilicate glass surfaces

Untreated	0.13 mg/mm ²
Treated	0.01 – 0.02 mg/mm ²

These results are not meant to suggest “in vivo” applications of PS200. PS200 should be used only in treatment of diagnostic apparatus for clinical analysis in external human body applications

PS200 STABILITY

- Aqueous solutions of PS200 are not stable indefinitely and may turn cloudy
- Small precipitate may form during storage which does not affect its properties
- If over 1/3 of the volume contains precipitate the solution should not be used
- The solution may turn cloudy at low temperatures, gentle warming will correct
- Shelf life is 6 months from the date of manufacturing