



# First Contact™ Polymer Solution

Next Generation Clean!

Not for use on some plastic lenses or eyeglasses!

## What is First Contact™?

**First Contact™** is an easy to use one-part polymer solution that cleans and protects precision optics and other surfaces. It applies as a liquid and dries to a flexible film that is peeled off leaving an amazingly clean surface! **First Contact™** consists of designer polymers in a complex solvent system that provides optimal surface adhesion to safely and effectively clean optical surfaces without thermally shocking the surface. No dragging or scratching. No peeled coatings. Easily poured, brushed or sprayed.

## Cleaning & Protection:

**First Contact™** provides a barrier to oxygen, sulfur compounds, water (not immersion) and water vapor. The tough, elastic film prevents abrasion damage and eliminates the possibility of sensitive surfaces becoming scratched or dirty.

## Safe for use on:

**First Contact™** is safe to use on all glasses and metals, also silica, Si, Ge, NaCl, KBr, KRS-5 etc. and all polar inorganic crystals including nonlinear optical crystals like coated BBO. It is safe on all coatings, including AR & reflective coatings, and most first surface mirrors & gratings. Do not use on plastics that dissolve in polar organic solvents such as acetone.

**First Contact™** comes in large quantities or kits consisting of an applicator bottle, peel tabs and multiple refill bottles (1 oz). An ounce can clean dozens of one-inch diameter flat optics. Order from one of our distributors near you or on our website.

## SAFETY AND HANDLING:

**FLAMMABLE MIXTURE. KEEP AWAY FROM SPARKS AND OPEN FLAME**

First Contact is a flammable solution containing alcohols and acetone (for safety concerns, compare to fingernail polish). Use only with adequate ventilation. Wear protective outer garments including gloves and goggles. Keep out of eyes and mucous membranes. If splashed into eye, rinse with copious amounts of water. Consult physician. If ingested, induce vomiting. Consult physician. Material Safety Data Sheets available on website.

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**First Contact™** is ready to use from the bottle. We recommend some testing and trial applications before attempting a critical use. To peel, be sure film is thick enough & completely dry. Contact us for application assistance.

## DO NOT USE TO CLEAN SOME PLASTIC LENSES, EYEGLASSES, POLYCARBONATES, ETC.

1. Apply **First Contact™** by gently using a brush or, for larger objects pour directly onto the surface and spread. Do not allow **First Contact™** solution to get under retaining rings or mounts. If necessary and convenient, apply multiple thin coats to create a film that is thick and mechanically strong enough to remove in one piece.
2. Spread **First Contact™** Polymer solution gently with a brush, using the polymer's surface tension; do not touch the surface directly. Do not use the brush to 'work' the liquid onto the surface. A tab of chemical resistant nylon mesh or unwaxed dental floss may be set into the liquid polymer to peel the dried film from the treated surface. This technique is helpful with small or recessed surfaces. For small objects, like fiber ends, it is often easier to secure the peel tab to a table and touch and peel back the coated object to remove the **First Contact™** film. Also, a thick "drop" may be applied near the edge to start the peel, by inserting a pin in the dried film only and lifting.
3. ALLOW THE SOLUTION TO DRY THOROUGHLY. Cure the polymer by allowing it to dry completely, minimum 20 minutes, or by experience (some small, flat optics can be peeled in a few minutes, others like frosted surfaces must dry for hours or overnight). Film adhesion is quite high before curing is complete, but is minimal for the dried film. The polymer film may not be dry even when the surface feels dry to the touch. Be patient. The polymer solution dissolves dried polymer, so if it was too thin when peeled and some film pieces remain on the surface, just reapply the liquid in a thicker coat, allow to dry and then peel as usual.
4. Remove cured **First Contact™** polymer film by carefully starting and lifting at an edge with a peel tab, mesh or floss. Be careful not to start peeling underlying coatings on the optic with the peel tab, if a poor coating or a grating is going to fail it is weakest on the edges. Do not allow the peel tab adhesive to touch an uncoated portion of an optic. When using the adhesive tabs, press the adhesive firmly onto the dry polymer film at an edge, allow the adhesive to bond to the polymer for 20 seconds, lift and peel. Totally dry polymer peels off with minimal stretching and virtually no adhesion to the treated surface.
5. To clean up, put the caps on any open bottles. If a brush needs cleaning, wash it in **First Contact™** solvents. Acetone, while not optimum, may work. **First Contact™** polymer is inert, it can be disposed of in a regular trash can.

**First Contact™** cleans Diffraction Gratings! **First Contact™** penetrates nanostructures to remove contaminants including skin oils. Repeat applications of **First Contact™** may remove excessive amounts of contaminants and old, set deposits.

**First Contact™** does not repair damage on precision surfaces. It cannot be used on substrates that dissolve in acetone or ethanol.

**First Contact™** will not remove water soluble deposits or hard water spots. However, water soluble deposits can be removed in a two step process with **First Contact™** completing the clean up as described on our website under "Applications / Telescopes." Version 1.2

**Photonic Cleaning Technologies, LLC**

PO Box 435, Platteville, WI 53818 USA

[www.PhotonicCleaning.com](http://www.PhotonicCleaning.com)

[sales@PhotonicCleaning.com](mailto:sales@PhotonicCleaning.com)