

Cleaning the K1DM3 Mirror

Inspect the mirror for cleanliness twice yearly or if there is a noticeable loss of reflectivity. Clean the mirror yearly (or if inspection reveals the need) following the procedure below, and afterwards inspect the surface quality, looking for scratches, dings, water spots, blemishes or other signs of degradation in the coating.

Supplies Needed:

Lint-free tissues such as Opto-Wipes from Optoalignment.com
Orvus soap/water mix (1:50 ratio) in plastic squirt bottle
Ethanol (200 proof, NON-denatured) in plastic squirt bottle
Acetone in plastic squirt bottle
De-ionized water in plastic spray bottle
Compressed N2 or filtered dry air
Plastic sheeting
Masking tape

Cleaning Procedure:

- 1) Put the mirror in the horizontal position to minimize drips.
- 2) Blow off particulate matter with compressed N2 or filtered dry air. Do not use canned air, which can spit propellant.
- 3) Mask around the mirror with thin plastic sheeting taped to the side of the mirror.
- 4) Identify any problem areas, such as oil drips. If present, clean these first by laying a lint-free tissue over each and squirting ethanol on the tissue. Then lift the oil-stained tissue off. Repeat as necessary, then dab the area with acetone. Water spots should be addressed with de-ionized water instead of the organic solvents. Do not wipe the surface unless prior tests have shown that the coating can withstand that action.
- 5) Dab the mirror surface with a 1:50 mix of Orvus soap and water on lint-free tissues. One excellent choice is the 12" x 12" blue Opto-Wipe tissue ([link: optoalignment.com/shop/lens-maintenance/opto-wipes](http://optoalignment.com/shop/lens-maintenance/opto-wipes)).
- 6) Rinse by carefully spraying de-ionized water on the surface and dabbing it off with dry tissues. Do not spray around the earthquake clamps, to prevent drips when the mirror is tilted. Don't let the water dry on the mirror surface.
- 7) Cut the soap residue by dabbing with ethanol-moistened lint-free tissues.
- 8) If any residue remains, dab with acetone.
- 9) If there is any doubt about moisture having gotten under the earthquake clamps, blow the area gently with N2, pushing any drips toward the mirror edge.
- 10) Remove the plastic sheet mask, being careful not to let anything on its surface fall back onto the mirror.