

DSI • DEPOSITION SCIENCES, INC.

A LOCKHEED MARTIN COMPANY

HAND CLEANING OF SMALL COATED OPTICS

Technical Data Sheet



OVERVIEW

This note describes the procedure for hand cleaning of small (≤ 2 inch diameter) thin film coated optics. The steps presented are safe for the vast majority of optical coatings, which are typically composed of durable dielectric and semiconductor materials. However, some substrates and coatings may require specialized cleaning and handling (e.g., a color glass that is easily stained, or a gold coating that is easily abraded). If you have any concerns, contact the manufacturer.

EQUIPMENT AND SUPPLIES

- Isopropyl alcohol (Reagent grade preferred)
- Lint free cotton wipes, such as Texwipe® TX309
- Polyester cleanroom wipes, such as Texwipe® AlphaWipe® TX1009
- Petri dish or other suitable container
- Rubber air blower pump or compressed gas duster
- High intensity light
- Optional: mild anionic detergent, such as Alconox Liquinox®

INSTRUCTIONS

1. Line the petri dish with several layers of cotton wipes and fill with alcohol.
2. Place optics into the lined petri dish, taking care to ensure they are immersed.
3. Using a double thickness of polyester wipe, dry the optic by holding it along its edge and wiping both sides simultaneously with your thumb on one side and first two fingers on the other side. First, wipe with a single linear motion across the surfaces. Then, complete the drying with a circular motion, holding the wipe stationary and rotating the part with your fingers. As the part is rotated, move the contact point of the wipe from the center to the edge, ending by pulling the wipe off the edge of the part before stopping the rotation. If cleaning several optics, change to a clean wipe after every few parts.

4. Inspect part under high intensity light (a black background will facilitate this). If any contamination or cleaning residue remains, repeat steps 2 and 3. If part is still dirty, perform the optional detergent cleaning and water rinse, following the manufacturer's directions, and finish by again repeating steps 2 and 3.
5. Blow off the optic to remove any traces of dust or lint left by the polyester wipe.