



Handling of KODAK WRATTEN 2 Optical Filters

The structure of KODAK WRATTEN 2 Optical Filters requires that special procedures be followed to maximize their performance and life. KODAK WRATTEN 2 Filters consist of a cellulose triacetate base, coated with several layers of gel containing dyes, a gel inner layer and a polyurethane top coat.

When handling KODAK WRATTEN 2 Filters, every effort should be made to minimize contact with solvents, liquids and skin oils. By practicing proper handling techniques, you will maximize the life of the filter. Always try to unpack or open the filters in a clean, temperature-controlled environment. Never handle the filters with bare hands, as skin oils can permanently damage the filter. Instead, wear gloves or finger cots; alternatively, for smaller sized filters, it may be helpful to use optical or vacuum tweezers. Independent of the method used to hold the filter, if possible, only hold along the edges of the filter.

Filters can be easily scratched or contaminated and due to the different dyes used in each filter, some filters are more susceptible to damage than others. Avoid placing filters on hard surfaces, as any contaminant on the filter or the surface can be ground in or cause scratches. If it is necessary to manually cut a filter, the filter should be placed between two pieces of clean, stiff paper and cut with a pair of sharp scissors. The cutting line can be marked on the paper.

When not in use, filters should be stored in their original package, lens tissue or in clean paper. Filters should be kept flat and stored in a dark, dry place. Typically, for longer term storage the filters should be kept in a low humidity (<50% RH), low contaminant, and temperature-controlled environment (<26° C / 78° F).

KODAK WRATTEN 2 Filters should not be subjected to temperatures higher than 50° C (122°F). If these temperatures are exceeded, it should be only for a short period. The factors of time, temperature, and humidity are quite closely related in their effect on filter stability. Since individual dyes respond differently when exposed under identical conditions, some filters undoubtedly will retain their absorption characteristics at temperatures above 50°C (122°F), but others will not. For this reason, precautionary measures should be taken, if possible, to avoid subjecting filters to high temperatures. When used under the high humidity and warm temperatures that prevail in tropical regions, filters should be protected against damage from fungus. Dry, cool storage conditions are desirable; a desiccated, hermetically sealed container is usually satisfactory.

CLEANING:

Since cleaning a filter almost invariably involves handling it, please always make sure to follow the proper handling procedures. Filters can be permanently damaged if cleaned or handled incorrectly. It is suggested that a schedule of periodic replacement be considered for filters that are used frequently or are used in critical image-forming systems.

To remove dust and other loose contaminants from filters we recommend brushing gently with a clean, dry, camel's-hair brush, or use of inert dusting gas or a blower bulb. Do not use your mouth to blow on the surface because it is likely that droplets of saliva will be deposited on the filter surface.

If you are using inert dusting gas, hold the can upright before and throughout the procedure. Do not shake the can prior to or during use. Also, start the flow of gas with the nozzle pointed away from the filter. These steps help prevent the deposition of the inert gas propellant on to the filter surface. Hold the can roughly 15cm (6") from the filter and use short blasts. Pass the nozzle of the inert gas can over the filter with the nozzle at a grazing angle to the filter surface.

Gloves and finger cots: Gloves are important when handling almost any unmounted filter. Typically, gloves for handling filter are either cotton or powder-free latex.

Tweezers: Optical Tweezers and Vacuum Tweezers are commonly used to handle smaller filters. Optical tweezers are designed to hold small hard objects without slipping and with increased tactile feel. In addition, the specially designed tips of optical tweezers are made from a material (like carbon resin) that reduces the risk of scratching the filter. Vacuum Tweezers use a suction cup to hold a filter. They usually have a variety of tips that are specialized to hold certain shapes and sizes of optical components. In addition, since a vacuum is being used to hold the filter, many users find it easier to handle the filter because they do not need to be concerned about maintaining the proper pressure on the filter as is necessary with conventional optical tweezers.