

Instructions for Cleaning Up Broken or Burnt ZnSe Optics

Broken ZnSe Optics

Toxicity studies to determine the risks of handling or ingesting ZnSe have show that this material is not toxic. However, long-term effects of ZnSe dust inhalation are unknown. ZnSe is normally machined or ground using wet slurries to minimize any dust which could result in inhalation. In general, good work practices should be followed, such as washing hands after handling ZnSe to avoid any transfer of ZnSe dust into the mouth from handling food, etc.

If a ZnSe optic is broken, II-VI recommends that large pieces be gathered and placed in an appropriate container for later disposal. Small, dust-size pieces should be wiped up with a wet cloth or paper towel to avoid airborne dust. Broken or scrap ZnSe pieces should be disposed of in a properly licensed industrial disposal facility. ZnSe optics can be returned to II-VI for repair, refurbishment, or reclaiming of the optic.

Burnt ZnSe Optics

If a ZnSe optic is burnt or melted due to the absorption of the CO₂ laser, the ZnSe will decompose into ZnO and SeO₂. Cleanup of the decomposed ZnSe should be conducted by wiping the area with a wet cloth or paper towel to avoid airborne dust. The decomposed ZnSe may require abrasion to remove the ZnO and SeO₂ from surrounding lens mounts and beam delivery tubes. This should be cleaned up with a piece of wet sandpaper or other like method. The resulting material should be properly disposed of in a properly licensed industrial waste facility.

Disposal of Used or Broken Optics

Please contact our corporate offices at 724-352-4455 to reach our Warranty Return group, who will issue a Return Authorization Number for the return of used or broken optics to be disposed.