

PHOTOGRAPHIC SOLUTIONS, INC

Eclipse versus E2 on Canon 5D and in general

To clear up the confusion, please read the following. It's a bit long, so grab a cup of your favorite beverage and read on ...

Eclipse is purified methanol – 100% with virtually no water. Because it contains so little water (less than .05%) it evaporates instantly and is extremely effective at removing sticky residues such as oil droplets (which make the dust stick to your sensor – among other reasons). It has been tested extensively by many camera and sensor manufacturers, and in fact, the sensor makers were the ones who helped us put the product specifications together to make the first liquid for sensor cleaning – Eclipse. If it damaged sensors in any way, shape or form, they would have been the first to say so.

Until very recently (2007) sensors were protected by a sheet of glass acting as a UV filter or had some type of glass coated covering, so the actual sensor itself was pretty much inaccessible. When cleaning your sensor you were just cleaning a sheet of glass.

Methanol is a strong solvent and very effective cleaner.

Sony's new Alpha camera was introduced in 2006 with an Indium Tin Oxide (ITO) coating which is placed on the UPPER (exposed) surface of the sensor. Sony tested our Eclipse, and while they found it caused no apparent damage to their new sensor, they preferred a less aggressive cleaner be used. So Sony USA approached us to help them provide a cleaning solution for their customer service operations to safely clean the Alpha sensors.

Our recently introduced E2 was the result and was officially used by Sony repair facilities for their Alpha sensors. E2 contains ethanol, some methanol, and some isopropyl alcohol (IPA) which in itself contains 5% water – 100 times more water than Eclipse. Both products are currently spec'd to contain less than 1 part per million (ppm) of contaminant – the whitish haze left behind after the product evaporates and are equally pure. But because E2 contains far less methanol, it is a kinder, gentler solvent.

Naturally, when other manufacturers started to use similar coatings, E2 was the cleaner of choice. And because E2 was a gentler solvent, it could also be used in all cases where Eclipse was acceptable.

So when Canon introduced the 5D, our E2 seemed like the right choice since this camera also features an ITO coating. Then we started to receive indications from users that in some cases the ITO coatings were being dissolved by the E2, while in no case have we gotten reports that any 5D damage was caused by Eclipse alone. Our first action was to advise people to immediately stop using E2 on 5D's and switch to Eclipse while we researched the problem. In so doing, we discovered that another sensor cleaning company with a different cleaning method also had the exact same reports regarding its product – some 5D's were affected, others not. When we compared notes we discovered that all of the affected 5D's had one thing in common.

We requested that Canon investigate this phenomenon. Canon has conducted a thorough investigation and determined that there is no quality issue with their products. However, it found that our product causes the coating on the surface of the image sensor to be removed on some EOS 5D cameras *as a result of a variance in the coating on the surface of the image sensor of the EOS 5D.*

So that explained to us that E2 was not the problem – it was the coating in the first few cameras that were affected. Once we determined this, we changed our recommendation for 5D's back to our original recommendation : E2 . We completely understand the confusion this has caused and hope this lengthy

explanation helps to explain why we flip-flopped. Under our No Damage Guarantee we have made full restitution to the handful of people who damaged their 5D sensor.

Remember that E2 is a slightly different formula and that it contains some water. As such, it requires a slightly different technique : If you are used to applying Eclipse, use less E2 fluid than you would for Eclipse. Once you apply E2 to the swab hold it in the air for several seconds to let it dry somewhat before cleaning. And use less pressure than you would for a cleaning with Eclipse. If you get streaks (which can happen in rare instances - usually due to high humidity) use a clean swab and wipe the sensor surface gently. E2 is a great product but its different composition requires a different technique !

Thank-you for your patience while we took the time necessary to assemble enough data to establish a pattern, recognize that pattern, understand what was happening and contact the many entities involved including camera and chemical manufacturers. While this took some time, we are now completely confident that the problem has been resolved once and for all. All of us here are deeply appreciative of everyone's understanding and patience while we sorted it all out. *We know you have concerns about sensor cleaning and thank-you for your continued trust. We are truly proud of our reputation earned after more than 25 years serving the photographic community **and to be the only company whose sensor cleaning products have many manufacturer recommendations and support.** There must be a reason !* We also want to reassure everyone that we continue to honor our Guarantee and that no-one should be concerned about sensor damage when they use our E2 or Eclipse liquids and our Sensor Swabs .

If you still have unanswered questions, please feel free to email or call us. We will do our very best to respond quickly, completely, accurately and most importantly - honestly.

Thank you.

Sincerely,

David M. Stone,
President
04 June 2008