

## U-V-KILLER INFORMATION

### U-V-Killer Application Tips and FAQ

Important: First wash garment in Sport-Wash. Scent-Free Sport-Wash rinses 100% removing all traces of old soap residue, grease, oil, dirt, and sizing that would prevent U-V-Killer from forming a bond with the fabric. Other soaps do not rinse out and they leave behind residue. Sport-Wash is safe for all fabrics and dyes.

Spray Dry Garments. Spray till surface is covered. Imagine you are applying a color and don't want the former color to show thru. Brushing with a small brush will make coverage more uniform. A ultraviolet (UV) light can reveal "missed" spots even while U-V-Killer is still wet. U-V-Killer extends the life of fabric five times from sun rot.

Fleeced or Insulated Garments. Extra care is required. You need to apply only a thin invisible coating. Spray a small area at a time. Use small stiff brush to raise froth on surface. Froth or foam bubbles keep the UV absorbing dye out on the visible surface while it dries. (This prevents the dye from soaking deep into the fabric where it will have no optical value). Deep soaking not only wastes U-V-Killer but will cause stiffness in heavy fabrics.

You may check the effectiveness and completeness of your application with a fluorescent black light. The bulb should appear dark VIOLET when not lit and will be labeled "BLB". These are often used in bug zappers and we have a battery powered pocket unit available. Most paper contains UV brighteners and you can spray a spot to see how it will darken where U-V-Killer is applied.

All Fluorescent Orange has UV-Brighteners and most of it is water repellent. We have enhanced the wetting power of U-V-Killer for easier, more permanent application on Blaze Orange and other water repellent fabrics. You can be safe, legal, and successful.

Treated garments may be worn when completely dry, but 72 hours of adequate ventilation is required for the bond to reach full durability and for the garment to be scent free. Re-washing, waterproofing, and cover scent applications should be delayed for this 72 hours. The U-V-Killer treatment is designed to be permanent, and on most fabrics it will endure for the life of the garment.

A single washing in commercial detergents, fabric softeners, and or "Color Safe" bleach (while not removing the treatment) will render the U-V-Killer useless by depositing new brightener dyes on top of it.

Always wash a load of non-hunting clothes in Sport-Wash prior to washing your treated camo & blaze orange in order to remove residual brighteners from your washer and dryer. It is recommended that you confirm the absence of brighteners each season using a UV light.

### FREQUENTLY ASKED QUESTIONS

1. Will U-V-Killer , on my camo, cause skin irritation?

No. U-V-Killer will not cause skin irritation unless someone is allergic to the dyes used on all

clothing. When applying **U-V-Killer** , wash your hands when you are finished as there is no advantage to treating your skin.

2. Will **U-V-Killer** cause my camo to fade or discolor?

No. It will in fact protect your camo from fading caused by ultraviolet radiation. **U-V-Killer** is specifically formulated to be compatible with the dyes and fabrics used in the manufacturing of clothing. Poly/Cotton camo cloth tree blinds last 5 times as long if treated with **U-V-Killer** . It protects umbrellas, awnings, sail covers, tents and all outdoor fabrics from sun damage.

3. What effect, if any, does **U-V-Killer** have on the cloth?

With most fabrics there is no difference in feel, or hand as it is called in the textile industry; some fabric may feel slightly stiffer after drying but this slight stiffness disappears with wearing. If you want to eliminate this slight stiffness quickly before wearing, simply put the garment in your clothes dryer and tumble it with no heat for 15 minutes.

4. Does **U-V-Killer** treat the inside of the garment when I spray it on the outside?

No. You must spray the inside of lapels and pocket flaps to insure full treatment.

5. How durable is the **U-V-Killer** treatment, and do I have to retreat my camo, and if so how often?

On cotton garments **U-V-Killer** lasts forever, as long as you wash your camo in Sport-Wash. If you wash in Tide®, Cheer®, etc., you will have to retreat with **U-V-Killer** as you have redyed the cloth with brighteners. Synthetic fabrics last anywhere from 12 to 18 washings and then the garment must be retreated with **U-V-Killer** . So it is a good idea to retreat every season or two, especially knees, elbows and other areas of high abrasion. Normal wear (rain, snow, etc.) will not affect the **U-V-Killer** treatment.

6. Can I treat my clothes with a waterproofing spray like Silicone Water-Guard after using **U-V-Killer** ?

Yes. Waterproofing sprays work and have no optical effect on **U-V-Killer** . Always apply **U-V-Killer** first and allow to dry 72 hours before applying repellent. Be sure to test the water repellent for UV Brighteners. Many silicones and /or fluoropolymer repellents contain wax extenders that glow in UV. Those would defeat your purpose just as washing in the wrong detergent. Silicone Water-Guard Brand is free of brighteners as is our Permanent Water-Guard.

7. How does **U-V-Killer** affect waterproof garments?

Waterproof materials are still waterproof after treatment. Waterproof / Breathable membranes like Gore-Tex® are not effected at all. **U-V-Killer** does not cause any problems to seams, threads, or glue joints on any synthetic fabrics.

8. I've treated my camo and I still see a blue glow with my UV light source. Does this mean that it is not working?

Two possibilities exist. First, you may be seeing only visible blue and assuming it is UV. **U-V-Killer** does not block visible blue because blocking it would change the appearance of your camo in the visible spectrum, (We assume that you chose a pattern & color that appear to be right for the terrain you hunt). The UV light source, even the flashlight we sell, has some visible violet wavelengths present, and if all UV is absorbed you will still see some of this visible violet. If you place a single drop of **U-V-Killer** on a piece of brightened white paper or cloth and check it with the light source, you will see a dramatic difference because the brighteners are seen more on white. This demonstrates how effectively the absorber in **U-V-Killer** is working. You may be assured that a good application of **U-V-Killer** is just as effective on your camo and blaze orange.

The second possibility is that the application wasn't sufficient. Excess brighteners on the cloth will float to the surface of the U-V-Killer treatment. These excess brighteners must be removed by first washing with Sport-Wash. Wash twice if in doubt. Clean old detergent residue (which is full of brighteners) from washer by washing non-camouflage clothing in Sport-Wash before washing your camo. Be sure to dry your camo (according to the care tag instructions) before treating with U-V-Killer. When applying U-V-Killer imagine you are applying a light coat of paint to the exterior surface. You want to cover every thread. If the spray is leaving spots, gaps, or streaks use a small brush, cloth, or even your hand to spread it back and forth. A bubbly white froth will remain visible up on the surface for a few minutes so that you can see that the coverage is complete. Check your progress with a black light.

To properly check your camo under black light you must use a true Ultraviolet fluorescent light source. There are at least three domestic manufacturers of Ultraviolet tubes, for example- General Electric "BL", Westinghouse "BL", and Sylvania "Black light 350". These black light tubes have radiation peaks at 350 nanometers. They will activate brighteners (like Tinopal by CIBA GEIGY) which are common in detergents. Manufacturers also offer "BLB" tubes. These are better because they have a blue filter to block visible wavelengths, they appear blue and are marked "BLB". They cost more but make it much easier to detect UV Brighteners. A true UV light source will enable you to make a complete check of all your hunting gear and provides a way to double check yourself once you have treated your equipment with U-V-Killer products.

9. Will U-V-Killer change the appearance of my camo? Will it look any different to me?  
No. All colors, camo, and blaze orange will look the same to you in full daylight.

10. Will U-V-Killer crack or peel off at high or low temperatures?  
No. U-V-Killer forms a permanent bond.

11. Is U-V-Killer flammable?  
No. In fact you can put out a fire with it.

12. What about odor? Does U-V-Killer have any lingering scent?  
No. U-V-Killer is scent free when dry.

13. Will U-V-Shield work on outdoor items that are exposed to severe weather?  
Yes. U-V-Shield is a clear weather proof coating that works great on items exposed to the elements such as duck decoys.

14. Can I still spray my hunting clothes with a scent killer like N-O-DOR?  
Yes. U-V-Killer has no effect on N-O-DOR or how it works.

15. Does Atsko make anything to make my Gore-Tex® jacket waterproof again?  
Yes. When your jacket was new it probably shed water because of a factory applied Fluoropolymer treatment on the outer shell. Contamination from wearing and residues of other detergents have made that repellent ineffective by providing pathways for water to wet through it. Wash the garment in Sport-Wash according to manufacturers recommendations. This will remove all residues and surfactants. Now iron the shell at the highest setting allowed by the manufacturer and the waterproofing will work like new again. If there was no factory waterproofing treatment, you can waterproof the garment with our Silicone Water-Guard. If the shell material is synthetic and can be ironed we recommend new Permanent Water-Guard water based fluoropolymer repellent. The results are guaranteed.

## 16. What about use on Carbon Suits?

All suits using carbon, charcoal, abscents, or any absorber or adsorber for odor control should be washed only in Sport-Wash. Treatment with U-V-Killer does not stop these garments from working. Remember other detergents leave residue which will clog up carbon suits and stop them from absorbing / adsorbing odor molecules.

## Special Challenges for Application of U-V-Killer

There are several fabric structures that can interfere with the proper application of U-V-Killer and they can be extremely difficult to overcome. It is certainly preferable to select new camo without brighteners whenever possible.

One of the most common challenges is water repellent fabric. If you are applying the repellent, this problem is solved by simply applying the U-V-Killer first. After it is fully cured you can apply any non-glowing repellent right over it.

If the repellent is a silicone it can probably be removed in 2 or 3 washes in Sport-Wash. If it is factory applied, it will continue to repel U-V-Killer even after washing. You can increase the wetting power of U-V-Killer with the addition of 1 teaspoon of Sport-Wash or alcohol. It will also help to apply U-V-Killer right after the washer spin cycle instead of drying it first. It may also help to use a bit of fleece cloth or a veggie brush to spread U-V-Killer and work it into every cavity between fibers.

Mixed fibers like poly/cotton, while often no problem at all, can be near impossible to treat if the slicker fiber is the one that glows. The U-V-Killer treatment will drain into the more absorbent fiber leaving the glowing fiber untreated.

Absorbent fibers that have been surface treated can cause variable results. The problem is that printing, repellent, sizing, or other treatment may reduce the ability of the surface of the fiber to hold U-V-Killer while still allowing it to soak into the inside of the fiber. It may require several treatments to fill the fiber, and the surface may protect enough untreated brighteners to continue to glow. These items may look and feel like ordinary cotton but may not be treatable.

While many of these structures may accept treatment after many wearings and washings, when new, they may be impossible. If you treat only a small, hidden spot and it refuses to stay dead after several treatments you may be able to exchange the piece for something without brighteners. When all hunters have proper UV lights we suspect most marketers will increase their efforts to supply camo and blaze orange without brighteners.

Possible pretreatment like bleaching, abrasion, sealing etc. will certainly cause unacceptable damage, especially to a new garment. A thicker, heavy bodied product, like our U-V-Shield which is made for solid surfaces, could adhere better, but the increased thickness would stiffen the garment and make it abrasive and noisy. We have designed U-V-Killer to work on the widest possible range of fabrics but there are pieces that cannot be fixed. While all orange must be treated, you can save time, effort and money by selecting new camouflage that does not glow.

## Special treatment for Difficult Items with U-V-Killer

With the help of feedback from some of the thousands of hunters who now have UV lights, we have identified difficult-to-treat items and special methods to treat them. Sometimes you can encounter a fabric that is not water repellent and appears initially to cover well, but when dry, it appears not to have been treated at all. This is not a failure of the absorbing dye, but rather a relocation of it to areas between, below, or inside the surface fibers where it can no longer block the uv energy that causes the brighteners to glow.

We have 2 techniques to overcome the problem which we have found successful on 100% polyester and 100% cotton. The first technique is presoaking. This apparently pre-fills with water, the voids that might otherwise become "black holes" for U-V-Killer to be lost in. Simply treat the item immediately after the final spin from the washer. The extra water may slightly dilute the U-V-Killer, but this is much better than having it disappear completely.

The low viscosity of U-V-Killer makes it spray and penetrate well, but also allows it to "creep" away before it dries. This can be minimized by applying heat immediately after treating. A small item like a hat could be done with a hair dryer, but for jackets, pants or coveralls, have your clothes dryer running on high temp and toss in each item as soon as you finish treating it.

These special techniques are not usually necessary, but they require no extra effort and testing the item with a spot of U-V-Killer will indicate if this extra attention is needed.