Make Your own Permethrin Based Tick Repellent

The concentrated permethrin you want to buy to make a spray on solution for clothing is water based NOT petroleum based. The water based product adheres to clothing whereas the petroleum based doesn't. If it has a strong odor it is the petroleum based product; the water based product has a slight odor. Amazon.co has 10% Martin's Permethrin which is water based. You mix Mix 1 part of Martin's 10% to 19 parts water to get 0.05% which is the same concentration as the commercial spray products.

The below article is one I found on the internet and it deals in depth about the options for three different methods to treat clothing.

"Permethrin Fabric Treatment Options:

There are three specific dosages used to impregnate fabric with permethrin.

For protection up to one year (52 weeks): 0.125-mg permethrin per square centimeter of fabric. The protection will last for the life of the garment, 50 detergent launderings, or 1 year, whichever comes first. It is accomplished by applying a dosage of 1 pint of .8% mixture to a garment using Perma-kill 13.3% permethrin Solution by way of Controlled Wicking, Spraying or Soaking (see below).

For protection up to 6 weeks: 0.026 mg per square centimeter of fabric will yield 6 weeks of protection or 6 launderings and is accomplished by applying 2-1/2 ounces of .5% (1/2%) mixture to a garment by aerosol spray or non-aerosol spray.

F**or protection up to 2 weeks:** 0.008 mg per square centimeter of fabric will yield 2 weeks of protection or 2 launderings and is accomplished by applying 1-1/2 ounces .5% (1/2%) mixture to a garment by aerosol spray or non-aerosol spray.

TOTAL FABRIC IMPREGNATION W/ PERMAKILL 13.3% SOLUTION (52 weeks) Best suited for fabrics of cotton and cotton blend. May darken light colors or pastels due to the quantity of permethrin applied with this dosage. Clothing to be treated must be washable and suitable for exposure to water. Dry Clean Only products should not be treated. Do not treat underwear. Controlled Wicking - This follows the military procedure for personal application when spray application is not possible. The process is a controlled wicking process where a specific amount (dose) of permethrin is introduced to an individual garment under controlled conditions. You will need: a - pint measuring cup b - 1 ounce measurer c - several 2 gallon sealable plastic bags (e.g. Ziplock ™) d - a bottle of 13.3% permethrin Solution e - water f - clothing (Do not treat any under garments; treat outer garments only.) g - several large rubber bands h - rubber gloves

Instructions: Wear rubber gloves when handling wet solution. Add 1 ounce of Perma-kill 13.3% permethrin to measuring cup and top off with 15 ounces of clean water to make 1 pint. Roll garment to be treated tightly to a size that will fit into bag and secure roll with rubber bands. Place garment into

the bag, add the mixed (1 pint) of permethrin solution and seal the bag while removing excess air. Put bag aside for 2 hours minimum to allow thorough wicking. Remove garment, unroll the garment to ensure entire garment is damp without dry spots, air dry, mark with treatment date (month/year) and store. If wicking is not complete, roll garment and return to bag.

Note: Proper mixing of the permethrin with water by way of agitation/shaking is critical. Improperly mixed solution will leave a blotchy appearance on fabric caused by the permethrin and water not being thoroughly blended and/or separation during the wicking process. Make certain that you mix the solution completely before adding to the bag containing the garment to be treated.

This method has been tested and delivers protection within the following guideline - Properly completed, this procedure will impregnate the garment with a dosage of approximately 0.125-mg permethrin per square centimeter. The protection will last for the life of the garment, 50 detergent launderings, or 1 year, whichever comes first.

Note: Measuring cups (a) & (b) and sealable plastic bags (c), must be dedicated only to this process and not used for ANY other purpose.

Spraying - Wear rubber gloves when handling wet solution. A respirator is recommended. For treatment of a single garment add 1 ounce of Perma-kill 13.3% permethrin to measuring cup and top off with 15 ounces of clean water to make 1 pint of mixed solution in an appropriate pump up garden sprayer, or trigger spray. Lay clothing out and spray until wet using one half the mixture, flip over and spray until entire contents of container are applied, hang and let air dry.

For treatment of 8 garments mix 8 ounces of Perma-kill 13.3% permethrin with 120 ounces of water to make 1 gallon of mixed solution in an appropriate pump up garden sprayer. Lay clothing out and spray until wet, flip over and spray until wet, hang and let air dry. One gallon of mixed solution will treat eight garments (@ 1 pint per garment) with the proper dosage of permethrin. See section on garments for proper definition of garment.

Note: Proper mixing of the permethrin with water by way of agitation/shaking is critical. Improperly mixed solution will leave a blotchy appearance on fabric caused by the permethrin and water not being thoroughly blended. Make certain that you mix the solution completely before application and occasionally during application.

Submersion - Wear rubber gloves when handling wet solution. Follow all instructions for Controlled Wicking. Limit garment or equivalent (see section on garments for proper definition of garment) to 1-pint of mixed solution. Substitute pail or other dedicated container for sealable plastic bags. Note: Proper mixing of the permethrin with water by way of agitation/shaking or stirring is critical. Improperly mixed solution will leave a blotchy appearance on fabric caused by the permethrin and water not being thoroughly blended. Make certain that you mix the solution completely before submersing garment.

Storage - The ideal storage is to pack into plastic bag after it's completely dry (black garbage bags are perfect) and store in a dark place when not in use.

Garments - A garment consists of one pair of long pants (or an alternate of two pairs of short pants) or one long sleeve shirt (or an alternate of two T-shirts). Garments to be treated must be treated individually except when treating an alternate. When treating an alternate both items (e.g.: two pair of shorts or two T-shirts) must be treated at the same time. An alternate pair must be made of like material to ensure accurate wicking of the full dosage. Example - do not combine cotton blend with a nylon garment.

PARTIAL FABRIC IMPREGNATION W/ .5% (1/2%) permethrin (2 or 6 weeks) Other permethrin Dosages - There are two other dosages that have been tested for clothing treatment. Both rely on a .5% (1/2%) solution, which is available in pre-mixed 6-ounce containers (either aerosol or non-aerosol).

0.026 mg per square centimeter of fabric will yield 6 weeks of protection or 6 launderings and is accomplished by applying by 2 1/2 ounces to a garment by aerosol spray or non-aerosol spray. Retreat garments after 6 weeks or sixth laundering.

0.008 mg per square centimeter of fabric will yield 2 weeks of protection or 2 launderings and is accomplished by applying by 1 1/2 ounces to a garment by aerosol spray or non-aerosol spray. Retreat garments after 2 weeks or second laundering.

Note: For trips of short duration (6 weeks or less) the use of Duranon Tick & Mosquito Repellent at the proper dosage is far more convenient than total fabric impregnation.

There are many recipes for use of this product while only three have been tested. Only rely on tested methods for best protection. One frequently mentioned method is WRONG, here it is - Add the concentrate to the final rinse cycle while washing your clothing. DO NOT DO THIS! First you will over dilute the product thereby reducing its strength and effectiveness significantly. Secondly, you will be flushing the excess product into the environment through sewers or septic systems. Always follow manufacturer's instructions as the basis for use. This combination of permethrin treated clothing and a topical deet based repellent on exposed skin is known as the DOD system (Department Of Defense) and is recognized to perform at nearly 100% effectiveness. The deet repellent can be any repellent of less than 35% deet concentration. Keep in mind that no protection system will be 100% effective and that you must use other means to supplement the repellent. "