A LOT OF THINGS WOULD STILL BE AROUND

FREE 303 Products Sample Kit:
For just $6.00 Shipping and Handling you receive FREE 2oz. bottles of each of these 303 Products. 303 Aerospace Protectant – The World’s Most Powerful, Longest-Lasting UV-Screening Protection for Vinyl, Rubber, Fiberglass, Plastics and Leather. 303 Cleaner and Spot Remover – For carpet & upholstery. Removes oil, grease, tea, ink, wine and pet stains. 303 Shower Shield – Long Lasting Protection for people that HATE cleaning the showers. 303 Instant Windshield Washer Tablets – One tablet makes 1 gallon of the best windshield washer cleaner you’ve ever used. 303 Wiper Treatment Packet – Makes wiper blades work like new! Stops annoying chattering, skipping and streaming! Stops snow and ice from sticking to treated blades. Treats 2 – 3 Wiper Blades.
Shipped with information-packed brochures containing what you need to know about UV protection and preventing vinyl, rubber, fiberglass and outdoor fabrics.
Send check or money order for $6.00 in addition to Free Samples, 303 PRODUCTS, INC. P.O. Box 966, Palo Cedro, CA 96073. Allow 2 weeks for delivery.

FOR A 303 RETAILER NEAR YOU www.wheretobuy303.com

©2009 303 PRODUCTS, INC. P.O. Box 966, Palo Cedro, CA 96073
www.303products.com

ULTRAVIOLET RADIATION:
Only a small portion of solar radiation consists of variable ultraviolet (UV) light. But the light in this spectral range is responsible for photo degradation. Photo degradation results in discoloration, fading, embrittlement, cracking, chalking and/or loss of mechanical properties. Chalking gelcoat fiberglass, yellowing plastics, fading and weakening fabrics and sunburned skin are all familiar problems caused by UV light.

Before UV light can cause harm, it must first be absorbed. If it is not turned into heat or transferred to a molecule, the absorbed energy passes into the visible light range. UV stabilizers are a group of chemical agents with the ability to counteract or neutralize the harmful effects of UV light. These provide protection by converting UV light to heat and accordingly very resistant to photo degradation. All UV stabilizers are consumed as they do their job. In a way, they serve as sacrificial molecules, taking the abuse from the UV light instead of the material they are protecting.

This brief overview greatly simplifies this very complex subject. Discourting due to absorbers that have absorption into the visible light range is a problem. And there are many others.

A FEW MORE FACTS...
When UV light is absorbed, it starts to break chemical bonds which leads to bleaching (dulling), discoloration, chalking, brittleness and cracking – all indications of UV deterioration. The bond cleavages resulting from UV absorption cause the formation of “radicals.” Each free radical can trigger a chain of reactions (in the presence of air), leading to more bond cleavages and destruction. These oxidating chain reactions require no further UV exposure, just the presence of air.

Thus, it is important to provide UV protection with agents that use competitive absorption to convert the light wave energy into harmless heat (like carbon black does in tires – refer to Vol. II). It is equally important to protect with quenching agents that have radical scavenging ability.

Summary: No matter what it’s called – UV protection, UV screening, sunblock – to provide true UV protection in a maintenance product form, it is necessary to utilize effective, active chemical agents called UV stabilizers.

303 AEROSPACE PROTECTANT
For Rubber, Vinyl, Fiberglass, Tires, Plastic, Leather

With 303

Without 303

Shipped with information-packed brochures containing what you need to know about UV protection and UV degradation.

FOR A 303 RETAILER NEAR YOU www.wheretobuy303.com

©2009 303 PRODUCTS, INC. P.O. Box 966, Palo Cedro, CA 96073
www.303products.com

VOLUME 4
ULTRAVIOLET RADIATION

FOR A 303 RETAILER NEAR YOU www.wheretobuy303.com

©2009 303 PRODUCTS, INC. P.O. Box 966, Palo Cedro, CA 96073
www.303products.com
WHY ARE THEY BLACK?

The sidewalls of tires which are parked for extended periods dry, check and eventually split. An annual tire "dry rot" is a multimillion dollar problem for drivers, trailer buyers and owners of classic cars. This engineering problem is a scientific examination of the why of this process and explain in detail how 303 Protectant™ is an answer to the dry rot problem.

The manufacturers blend into the tire polymer certain chemical ingredients which inhibit damage from sunlight and ultraviolet light, the main environmental degradants of tires and all other types of synthetic and natural rubbers. Oxirane is an old-fashioned, but commonly thought of as the "elecrtric tire stock." Manage as in cities and manufacturing centers, an oxirane is a part of the air we breathe everyday. Hardened by the hazy effects of UV light, oxirane eventually causes rubber to dry and become brittle, no matter the locale.

ULTRAVIOLET LIGHT: The need to protect rubber against UV damage is why tires are black. For this purpose a common type of UV stabilizer called a "competitive absorber" is used. Competitive absorbers work by capturing the harmful UV light energy instead of the adjacent molecule of tire polymer... that's why it's called competitive! Competitive absorbers have the added ability to convert harmful UV light energy into heat so it can dissipate harmlessly. ALL tire manufacturers use the same competitive absorbers in their tires... an extremely vital and important part of the tire. So, it's not surprising that competitive absorbers are prohibitively expensive. This is why tires are black and why tires are not available in designer colors. ALL UV stabilizers are sacrificial, meaning they are gradually "used up" to where they cannot provide the UV protection any longer. As carbon black loses the ability to do its job, it turns gray. This is why rubber gray as it ages.

OZONE: Tire manufacturers use oxiranes to protect against ozone. When tires are in use (regularly running up and down the road for example) they flex. Flexing causes the protective oxiranes to migrate to the surface where they form a physical barrier between the air (oxygen) and the tire polymer. This process...the oxiranes migrating to the surface of the tire during flexing... is called "blooming." When there are not regularly used (parked RV, boat trailer or classic car, etc), the oxiranes do not occur. Ozone begins eating away the protective wax and before long reaches the tire polymer. Often by this time, the surface carbon black has lost its ability to protect against UV. With UV and ozone working on the surface simultaneously, the job of the stabilizers starts. The tire tires, checks and will eventually crack.

OTHER DEGRADANTS: Petrochemicals and silicone oils can remove the protective waxes and increase the rate of degradation. Common automotive "protectants" and "tire dressings" are typically devise of UV stabilizers of any type and contain petrochemicals and/or silicone oils which dissolve away the protective waxes and can actually aggrivate the sidewall. In the event of warranty sidewall failure, one of the first things tire manufacturers look for is evidence of the use of these types of products. When found, this is often cause for not warranting the sidewall failure.

303 FOR TIRES: 303 contains no petrochemicals or silicone oils and does not remove the protective waxes. 303 is actually bonded into tire, delivering its unique set of powerful UV stabilizers into the tire polymer, supplementing and surpassing the UV protective action of the carbon black, and leaving a long-lasting, protective finish that is water resistant, detergent resistant and will not attract dust. Oxirane must eat through the 303 before it can get to the wax. 303 is an extremely effective anti-adhesive and anti-ant. 303 is the longest lasting, most powerful protective and beautifying treatment for tires and all other synthetic and natural rubbers.

TIPS FOR TIRES: 303 treated tires look the same, wear, almost vinyl-like, dark black look of new rubber. 303 tires look and feel like brand new, not greasy for. MAXIMUM TIREFLY BEAUTY: Spray 303 directly on a clean dry tire using the thorough and with 303. Without touching the rubber, spray edge inside one inch or 25% to the tip of the 303. The regular use of 303 can actually prevent the tire and ozone damage associated with parked tires. Regularly every 20-30 days. 303 is 100% safe for all types of wheels, alloy wheels regularly treated with 303 repel water, road grime and brake dust and shine up far easier than untreated wheels.

VINYL:

A misread review of common vinyl fabric would show raw PVC (polyvinyl chloride) covered by a thin layer of plastic called the "topcoat." The topcoat is a part of the vinyl you can see and touch. To keep vinyl fabric soft and flexible, manufacturers add agents known as plasticizers to the raw PVC. A major function of the topcoat is to hold in those plasticizers. If the topcoat were what was degraded, the fabric would quickly evaporate, if the topcoat is damaged or degraded, plasticizers begin to escape leading to embrittlement/curalking failure. Protecting the topcoat, then, is the most crucial aspect of properly maintaining vinyl and the subject with which vinyl manufacturers are most concerned. Vinyl manufacturers agree on and recommend following:

1. General Cleaning: Never use household cleaners, powder or other abrasives, metal scouring pads or vapor degreasing. As the topcoat is a build-up product, holding in the heat absorbed from the sun and accelerating heat damage. Without 303, vinyl surfaces are more likely to discolor and lose their luster, than other plastic surfaces.
2. Application: Apply one (1) teaspoon, one-fourth (1/4) cup of hydroponic petroleum and three-fourths (3/4) cup of distilled water; rinse with cool water. Note: All cleaning methods must be followed by a thorough rinse with water. Obviously contaminants should never be used on vinyl because (a) Most waxes contain petroleum distillates. (b) Wax is a build-up product, holding in the heat absorbed from the sun and accelerating heat damage. (c) All vinyl manufacturers agree that no type of oil should be used on vinyl. (d) Silicone of treatments should not be used for several reasons: 1. Silicone of formulations typically attack the vinyl topcoat. 2. Siliconic of formulations usually contain no effective UV protective ingredients. 3. Siliconeic of formulations are build-up products which accelerate heat damage. 4. Siliconeic of formulations are greasy and oily, attract dust, and not more, read THE LABEL! Product directions suggesting more than one coat for better cosmetic enhancement are build-up products and are recommended by vinyl manufacturers.

303 FOR VINYL: 303 Protectant is a beautifying liquid sunscreen, the routine use of which keeps vinyl looking like new while dramatically extending its useful life. 303 contains no petroleum, distillates and no other synthetics or natural rubber. 303 is not a build-up product. 303 treated surfaces increase heat normality. 303 is not oily and greasy and does not attract dust. In fact, 303 treated repels dust. Dust and stains, stays cleaner longer and is much easier to clean than before. 303 contains a treated-safe-for- vinyl-cleaner and is a cleaner and protector combined. 303 is not to be used on printed, painted or treated surfaces. 303 has been tested and is recommended by major vinyl and accessory manufacturers. As the leader in UV screening technology since 1980, 303 is the most powerful treated surface treatment available for vinyl, rubber, gelcoat fiberglass and most plastics. Regular use of 303 can reduce UV caused dew free up to 300%.

303 FOR FIBERGLASS. . . Never buff or wax again!

Like vinyl, gelcoat fiberglass (polyester resin) is a UV sensitive material. Though manufacturers add UV stabilizers to vinyl and gelcoat fiberglass in the manufacturing process, these protective agents weaken over time and must be replenished. Protecting vinyl from UV degradation is listed (See Volume 5). Colored gelcoat fiberglass is particularly sensitive to UV degradation and 303 Protectant is by far the easiest way to make colored fiberglass look like new again and to keep it that way. Nothing else is even close.

303 Protectant works by preventing the formation of a new-cure and gloss. Spray on enough 303 to thoroughly wet the surface (303 goes farther if your sprayer is not runnning well) wipe away excess with a soft, absorbent cloth. Wipe until completely dry. Changing clothes as clothes become damp. Wait at least 20-30 min. 303 Protectant is not to dry before it is wiped off. If 303 has dried on the surface, it is easily removed by spraying the area with more 303 then wiping dry. For best results, apply 303 out of direct sunlight so fiberglass surface is not overly warm. A hot surface causes 303 to evaporate before it can do its job.

Reapplying. Reapply by spraying 303 on the surface and wiping dry with a soft, absorbent cloth... very much like dusting furniture and just as easy! For traileered boats, a convenient time to reapply is after trailering, just before trailer is dry. Lightly dust with 303, then towel dry, take an extra 30-40 sec. This is an excellent way to keep up the UV screen and totally prevent UV caused fade/slow fade. This dirt, road grime and 60 mile-an-hour bugs will not stick to a 303 treated surface (you'll love it!)

When To Reapply: 303 is water repellent (heads water). When the water repellency begins to diminish, reapply. Or if you think it may be time to reapply but don't know for sure, do a small spot with 303. If any of the color or luster comes back, reapply. Usually, a simple spray on/ wiped off rejuvenation every 30 to 80 days of exposure is sufficient. Does 303 Always Work? 303 always works unless there is something on the surface keeping 303 away from the fiberglass, gelcoat, silicone, polymer sealants or fresh wax. If the surface has been freshly waxed, it is not necessary to remove the wax. Just wait a few weeks and try again. Wax does not last long enough to warrant the effort required to remove it. About 2% of the time prefilling (compounding) is required. When required, be sure to use a rubbing compound that does not leave a coating or residue. Use pure rubbing compound with one that is the least abrasive. 303 is the leader in UV screening technology since 1980. 303 is the most powerful treated surface treatment available for vinyl, rubber, gelcoat fiberglass and most plastics. Regular use of 303 can reduce UV caused dew free up to 300%.