

Report #: SML0603-31

Product: Veil

Field Testing Date: 22 June 03

Report Date: 29 June 2003

Product: Veil is a liquid chemical compound designed to reduce the targeting range of police laser guns when applied to target reflective surfaces of vehicles. Police officers are trained to aim laser guns at license plates or headlights to obtain a speed reading. Seldom is targeting done past 1,000 feet as legal restrictions have been placed on targeting ranges of laser guns (see: New Jersey Superior Court ruling 1998, Judge Reginald Stanton).¹ **See Note Below.** Veil is manufactured by Veil Corporation.

Sales: 877-GET-VEIL (877-438-8345), International calls +1 610 239 2450., www.laserveil.com.

Laser Variables: Police laser guns use a 904 nanometer wavelength of monochromatic infrared light transmitted at specific pulse rates. Laser guns compute speed by knowing distance. Distance is known by the time it takes for one pulse to travel to a specific target and reflect back to the laser's guns computer. The computer remembers the time each pulse leaves the gun and is looking for this specific pulse to return. The color of a target vehicle is a great determinate in the lasers gun's ability to target. Black absorbs all colors, while white reflects all colors. Targeting a white vehicle is very easy for a laser gun even without headlights or a front license plate.

Test Parameters: As with all field evaluations conducted by Speed Measurement Laboratories Inc. (SML) of products, laser guns are only operated by certified police officers. This practice eliminates any claim of impartiality and insures testing credibility. Members of the El Paso Police Department and El Paso ISD Police Department conducted the test of Veil. The testing was supervised by SML's Dave Adams. Dave is a E.E. with twenty-five years experience with laser at White Sands Missile Testing Range.

Two different colored vehicles were used, i.e. a light grey Mustang and a black Mitsubishi Galant. Both vehicles were similar in size and shape and the distance of the headlights from the front license plate was similar for both vehicles. Officers operated a Kustom Pro III laser gun from Kustom Signals, Inc. Distance cones were placed at 1320 feet (400 meters) and 1000 feet (300 meters) . As a baseline for testing the effectiveness of Veil, both test vehicles were targeted by the laser gun at both cones. Both test vehicles had front license plates. A second baseline was established by removing the front license plates and retargeting with the laser gun. In both cases the laser gun had no problem in reporting the exact speed and targeting distance of each vehicle.

Veil was applied to all front reflective surfaces of both vehicles. When applied to the black test vehicle the Veil was effective in reducing the targeting range of the laser gun to 731 feet at the 1/4 mile cone of 1320 feet (400 meters), almost a 50% reduction in targeting range when aimed at the treated headlight. Due to the light color of the Mustang, Veil did not reduce targeting range when the treated headlight was targeted at 1320 feet (400 meters).

Seventeen states do not use a front license plate. A baseline was established on both vehicles removing the front license plate and targeting the vehicle with a license plate cover attached from both distance cones. The laser gun had no problem here. However, when Veil was applied to the license plate cover and no license plate attached, Veil reduced the laser gun's targeting range from 1320 feet (400 meters) to 725.5 feet (220 meters) on the black test vehicle, almost a 50% reduction in the laser gun's targeting ability. Now the license plate was reattached to the front bracket behind the treated license plate cover. In this instance, Veil reduced the laser gun's ability to report a speed reading from the untreated 1,000 foot (300 meters) cone to 767 feet (232 meters). Veil had no effect in target reduction in the light grey test vehicle from 1,000 feet (300 meters).

Conclusions: Veil should be used in conjunction with *good radar laser detectors*. Field studies consistently report detectors will report a laser targeting easily at 1,000 feet. However, when the radar laser detector notifies the driver of laser's presence, it is too late as there is no advanced warning. This notification means the driver just received a ticket. As the results show, Veil was effective in reducing a laser gun's ability to target the dark colored vehicle up to 50%. This reduction in laser targeting range acquisition afforded by Veil would give a driver with a quality radar / laser detector time to adjust speed until the vehicle came into the effective range of the laser gun. Veil works best on darker vehicles due to the coloration's ability to absorb infrared laser emissions. Even active laser jammers have difficulty in cloaking a white vehicle from laser guns. Light colored vehicles, due to their high reflectivity, are easy prey for laser guns.

All testing parameters were conducted in conjunction with accepted police training and field application practices of using laser guns for speed enforcement.

Results Attested To This Day

/Signed/

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Performance Certification-Veil claims to reduce the targeting range of laser guns on dark colored vehicles. Based on SML's field evaluation, this claim was verified. Veil does not claim to jam police laser guns, only to reduce targeting range. Performance Certification is issued to products that perform as advertised. SML does not endorse, nor condone use of products evaluated.



Based on advertising claims of Veil, **Performance Certification** is hereby awarded.

¹ **Note:** SML established the 1000 foot test of the laser gun procedure upon a NJ ruling: New Jersey Court ruling 1998, Judge Reginal Stanton. However, not all states in the USA follow this ruling of maximum laser gun usage of 1000 feet and no international country uses 1000 feet as a maximum distance to use a laser gun. In fact many international countries use 1500 feet to 2000 feet distances for laser gun usage. We believe it is important to state three points.

First, European and Asian laser targeting frequently takes place in excess of 1500 feet (455 meters), therefore Veil would be quite effective at preventing laser gun speed acquisition at those distances.

Second, officers will not likely use pre-established targeting distances in the USA, such as cones, to constrain their targeting procedure. As such, initial targeting distances may be greater in actuality.

Third, individual states, troopers, and state/county/city police may not be aware nor recognize New Jersey's ruling. Therefore, it is reasonable to state that laser guns, in general, are used at a variety of distances in the USA as well as in international countries and if Veil defeated the laser gun at 1000 feet, then it would also defeat a laser gun from 1000 to 2000 feet. At these distances, a lighter colored vehicle would also be protected from laser gun speed acquisition.

While Veil protection has been found to be ideal on darker colored vehicles as close as 700 feet from the laser gun, we would point out that Veil also reduces a laser guns maximum targeting distance on light colored vehicles as well. When Veil corporation retests next year with Speed Measurement Labs, we will revise the format to account for testing distances of 1500-2000 feet to support international laser gun usage.