

Insure Against flats



**ULTRA  
SEAL**<sup>(R)</sup>

# ULTRASEAL (S.A.)



**WORLD'S # 1  
TYRE SEALANT**

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## BALLISTIC TESTING OF ULTRASEAL COMBAT GRADE

### WITH ARMAGUARD

The following tests were carried out with the co-operation of ARMAGUARD at Hindmarsh S.A. on Thursday July 16th., 1987.

Tyres used were a tubeless radial 195 x 14 8 ply, mounted on a Ford Transit van wheel, and a tubed 7.50 x 16 tyre mounted on a Ford F-350 wheel. Both tyres used were past their useful life and were about to be scrapped.

Tyre pressures used for these tests were 50 psi in each tyre.

The preparation of the tyres entailed treating each tyre with ULTRASEAL "COMBAT" grade, the Transit van's tyre receiving 16 ounces, and the tubed F-350 tyre receiving 32 ounces. As the tyres were not on vehicles, both wheels were rolled by hand for about 150 metres to distribute the product prior to testing in the target range.

### TEST "A" TUBELESS TRANSIT VAN TYRE - SHOT IN TREAD AREA

| <u>Test No:</u> | <u>Projectile</u>                                       | <u>Tyre Sealed</u>                     |
|-----------------|---|--|
| 1               | 357 Magnum slug   | after rolling ½ turn.                  |
| 2               | 9 mm slug   | instantly                              |
| 3               | 357 Magnum slug<br>(near tyre shoulder)                 | after rolling ½ turn                   |
| 4               | "00 Buck" - 9 x 33 calibre rounds in shotgun cartridge. | Instantly                              |
| 5               | 12 gauge Brenneche solid rifled slug (18mm diam.)       | Rim was damaged - would not hold air.* |

\* As the rim was unable to hold air, owing to a split one inch long by about one-sixteenth of an inch wide, the sidewall tests could not be carried out. After installing this tyre on another rim, all holes sealed and the tyre holds 50 psi once again.

### LEGEND TO PHOTOGRAPHS Nos. 1 - 4:

- 1 Debris on left side of photo shows what was removed from Transit tyre on dismounting tyre. The largest piece is the 12 gauge Brenneche slug which ruined the wheel. On the right are the 357 Magnum slugs, the 9 balls from the "00 Buck" cartridge and a sectioned cartridge from the Brenneche - 18mm diameter!

BALLISTIC TESTING OF ULTRASEAL COMBAT GRADE continued:LEGEND OF PHOTOGRAPHS Nos. 1 - 4:

- 2 A close-up of the tyre showing 8 of the 9 wounds from the "OO Buck" shotgun. These wounds sealed immediately, and caused the marksmen to be absolutely amazed.
3. The ruined wheel, still showing traces of Combat grade Ultraseal inside the red wheel well. The damage to the wheel is quite clearly seen, at the lower part of the wheel which is made from 4mm steel. In the foreground are the remains of the slugs used in the test, and unused slugs on the right.
4. The Transit van's radial tyre mounted on another rim and holding 50 psi pressure.

TEST "B" TUBED F-350 TYRE - TREAD & SIDEWALL AREAS

| <u>Test No:</u> | <u>Projectile</u>                                      | <u>Tyre Sealed</u>   |
|-----------------|--|--|
| 1 & 2           | 357 Magnum slugs in tread area.                        | After rolling $\frac{1}{2}$ turn.  |
| 3               | 357 Magnum in sidewall                                 | After rolling $\frac{1}{2}$ turn.  |
| 4               | 9 mm slug in sidewall                                  | After rolling $\frac{1}{2}$ turn.  |
| 5               | 12 gauge Brenneche solid rifled slug (18 mm diameter!) | Tyre was rolled several times. Tyre was damaged and would not hold air, allowing air to escape slowly.** |

\*\* Ultraseal's Combat grade sealed the entry wound of the tube and tyre but could not seal the exit on the sidewall as the slug had "mushroomed" on entry, causing a larger exit hole.

On removal of the tube, it was noted that all small holes on the tread area had sealed. The 12 gauge slug's entry hole measured 7.5mm x 10.5 mm and the exit hole was 12.5 mm x 13.5mm, all measurements being taken on a deflated tube. Had the tube been inflated, these holes may have been much larger.

The wounds on the tyre sidewalls measured 7 mm diameter on entry and 6.5 mm diameter on exiting.

LEGEND TO PHOTOGRAPHS Nos. 5 - 7:

- 5 The 7.50 x 16 tubed tyre showing the entry wound has sealed.
- 6 The tube showing the exit hole in the sidewall area. A sectioned 12 gauge cartridge stands along side.
- 7 The tube and debris from the previous test.

ARMAGUARD's very helpful staff were most impressed with the sealing capacity of this product.