

# Frangible Slugs – A Safer Load For USPSA Shotgun?

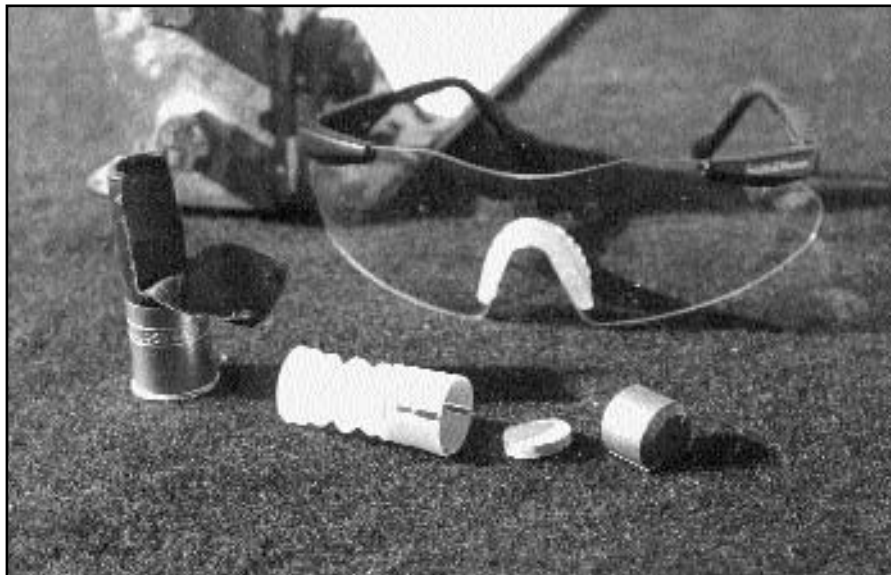
STORY AND PHOTOS BY PATRICK KELLEY, A-14401

In front of you stand three Pepper poppers and three paper targets. You've stagger-loaded your shotgun shot/slug/shot/slug so you can sweep across the array without having to back up. You're all keyed up, ready for a screaming start. You rack the bolt and top off the magazine as you make ready.

The range officer yells "Stand by!" and you zero in on that first target. As the adrenaline dump starts, a question pops into your head. "Did I top off with shot, or with a slug?" Suddenly that little voice in your head shouts; "Hey, those poppers are close! If I slam one with a slug, I could get hurt!"

BEEP!

The above scenario is all too real. I've seen it happen, and I've been there when slugs hit steel at close range. Even at longer ranges, I've seen slug fragments injure competitors and bystanders. Lead slugs are an important part of 3-gun competition and are quite safe when handled correctly, but when mistakes happen, lead slug fragments can hurt you. Everyone at USPSA matches wears eye protection, but the fragments coming from a shotgun slug are much larger than typical lead splatter from handgun rounds. Some of those fragments are large enough to punch deep into the flesh,



**New from International Cartridge Company (a division of Sinterfire), this frangible shotgun slug offers great potential. With it, shooters can engage steel plates within FEET, and do so safely. The slug itself is a hollow cup with no rifling flutes. It weighs 325 grains, and flies at 1400+ fps.**

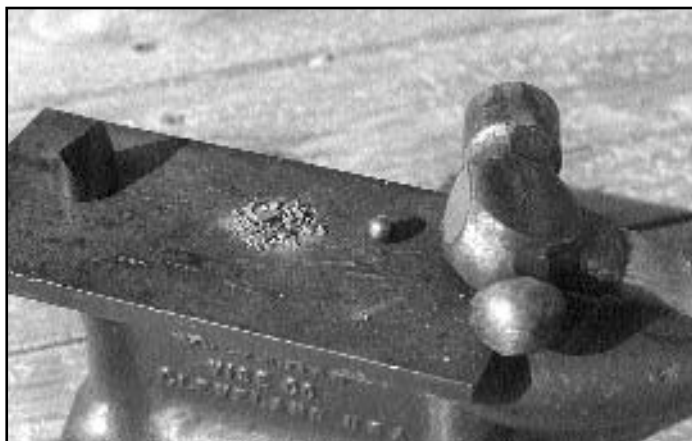
creating a serious wound – like that which happened to Kelly Beale at last year's MGM 3-Gun Games, or to USPSA Junior Coordinator Bill Sahlberg a few years prior. Both men were able to drive themselves to the hospital, but had their fragments impacted elsewhere (into the neck, into the inner thigh, into the thoracic cavity) those wounds could have been very serious indeed.

In the above scenario with standard ammunition, anyone standing on the range would be in jeopardy. But today we're using lead-free frangible shotgun slugs developed by International Car-

tridge Corporation (ICC). Now, instead of dumping your ammo into the berm and re-loading, you can risk a few shots to get back in sync. You can salvage an otherwise hopeless run – without risking your skin.

ICC offers an extensive line of lead-free frangible pistol and rifle ammunition, but it's their frangible shotgun slug that really sets them apart. After reading about Kelly Beale's injury in Front Sight, Keith Porco (member of the International Cartridge shooting team) sent Front Sight a sample lot of 12 gauge slugs and a handful of 00 buckshot for testing. I tested both for accuracy and fragmentation, with the results appearing below.

Both loads were fired through a 22-inch Browning Auto 5 with rifle sights and the new Winchester SX2 equipped with a 22-inch tube and rifle sights. The barrels were choked Skeet #2 (.002" tighter than improved cylinder) and cylinder bore respectively. Both guns shoot very well with almost any slug and have demonstrated excellent reliability over time. The ammunition from ICC did little to upset those characteristics.

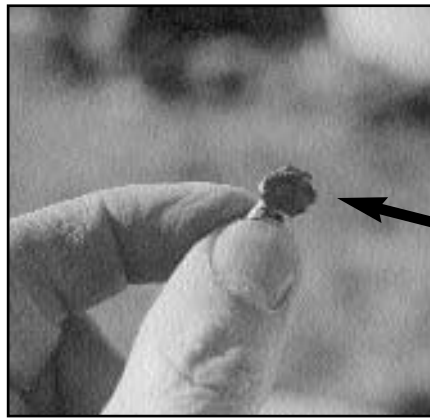


**Dust to dust.** At left appear two of ICC's frangible buckshot pellets. One new, one struck with a ball-peen hammer. Note the total absence of large fragments.

### **First, The Slug:**

Weighing in at 325 grains and flying over the chrono screens at 1400 fps, the ICC slug shot plenty flat to 100 yards with good accuracy up to 50 yards. The load (still a prototype) uses Fiocchi hulls and a conventional-looking shot wad with two stacked wad cards under the slug. The slug itself is hollow based and beveled on both ends, but lacks the pronounced external rifling of a normal slug. It is composed of copper colored material (sintered copper with a binding agent) with a gray finish. (Porco later explained this is natural oxidization.)

During testing in less than ideal conditions (winter in eastern Washington) groups ran 2.5 inches at 25 yards, 3.5 inches at 50 yards, 7 to 8 inches at 75 yards and 12 inches at 100 yards. Up to 50 yards the frangibles shot accurately enough, but beyond that things got iffy. Just to make sure I wasn't way off my game, I shot five rounds of Winchester SuperX 1-ounce slugs at 100 yards at the same sitting — and put four into 3 inches. A fifth round (prob-

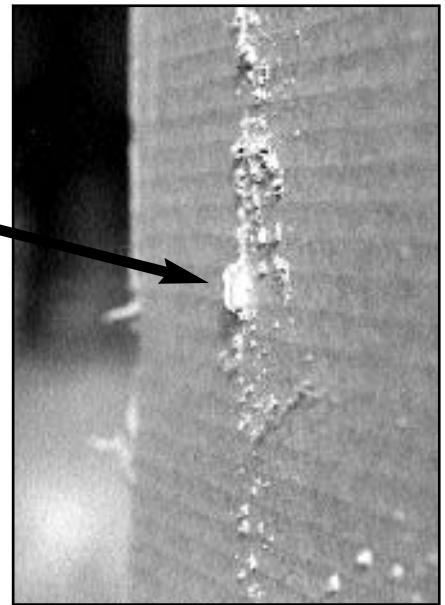


**NASTY Customer. This lead frag lodged itself in the cardboard box Kelley wrapped around his steel target. Others slashed through and sailed off into space.**

ably the first shot) opened the group to 6 inches.

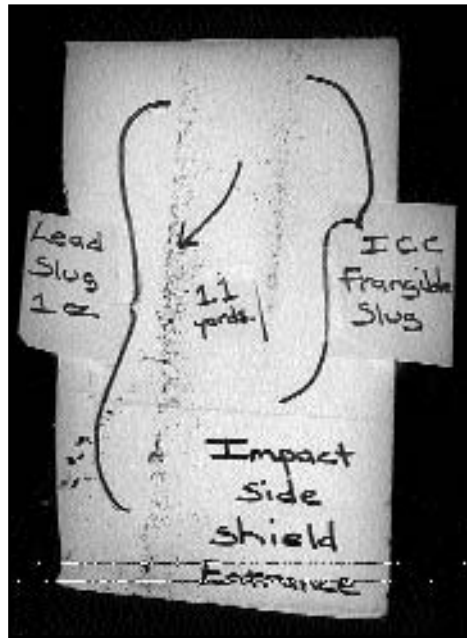
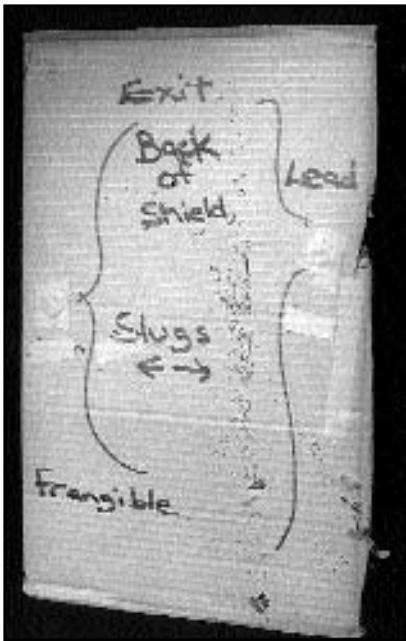
### **Next, The Buckshot:**

The buckshot loads contained a dozen 30-grain pellets with a total weight of 360 grains and a tested velocity of 1270 fps. Again a Fiocchi hull was employed, although with a less-than-conventional cushionless wad



holding 12 copper-colored pellets. Additionally, a blue plastic buffer was used to reduce pellet deformation. Strangely the pellets themselves were not completely round. Measuring .310" in diameter they have a flat band around the midsection that is .070" wide. One might think this would not be good for aerodynamics but patterns were acceptable to around 20 yards.

*Dawson Precision*



**Eloquent demo.** Look at the damage caused by the lead slug as compared to the ICC frangible slug. It's difficult to find any penetrations at all caused by the ICC frangible.

On the range, this buckshot patterned acceptably well, holding patterns as tight (but not as consistent) as Federal Classic and Winchester SuperX. I would have liked to have some more buck on hand to play with choke constrictions, but the best patterns are shown in the photos. When I mentioned the inconsistent patterning to



**Simple but effective.** Pat Kelley wrapped a cardboard box around a steel flash target to test fragmentation characteristics of the different slugs.

Mr. Porco, he advised me that this lot was subjected to water immersion testing and some of the waterproofing agent had contaminated the buffer material. Future lots will not use the same agent.

### **Performance On Steel:**

Okay, we know the ICC loads perform like "normal" ammo on paper, how do they work on steel?

They work very well indeed. For testing I used a flash target as my steel impact plate. This was covered on five sides with a 12-inch square cardboard box with the back open to the target (see photo). Shooting through the box onto the steel target, I expected to see a single hole for the initial penetration, with smaller holes for frags radiating out from there.

Starting at the 40-yard mark and working downrange, I placed lead and frangible slugs on the SOF steel through the face of the cardboard box, checking every shot for any sign of fragments returning uprange. None from either slug were found.

While tests for returning fragments came up no, tests for radial side fragments showed a resounding YES! Lead

slug fragments shredded the side panels, sending frags blasting through the cardboard, but the frangible slugs offered only a visible dusting. At the 11-yard mark I quit shooting the lead slugs. This was prudent, as rather large fragments were slicing through the side panels.

I continued moving closer, blasting away with frangibles at 8 yards, then 5 yards, until I finally blasted the test box from within 8 feet of the steel target. Only then did the smallest amount of dust fragments pop through the single layer of cardboard

As you can see by the cardboard side panels in the photos, the standard lead slugs completely penetrate and leave for parts unknown with pieces large enough to cause serious injury. In contrast, the frangible slugs' fragments are nearly harmless.

While the real beauty of this ammunition lies in close quarters combat training, we as competitors could benefit from the safety aspects and adequate performance. In our world with rules and range officers, we can enforce good judgment and safety practices and live with lead shotgun projectiles. However, if this ammo was competitively priced and readily available, new rules and some fun new scenarios could be around the corner.

### **Where Do I Get Them?**

International Cartridge's frangible slugs are just now hitting the market. Porco says they will be available on a broad basis starting around mid-year. For now, you can order them direct through International Cartridge Corp. at RR 1, Box 211 A, Reynoldsville PA 15851 (814) 938-6820.

The 12-gauge slugs carry a suggested retail price of \$4 per five rounds, or \$159.93 for a 200 round case. That's close to the suggested retail prices of lead slugs, but is a bit above the typical "street price." If the street price of these slugs comes in close to lead slugs, I'd choose them over lead for any slug target under 50 yards.

