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**Federal Expands Syntech Options for a Smoother Way to Shoot**

*Federal’s Syntech changed the landscape of target ammunition, and now has been expanded to include several additional types of loads.*

In 2017, Federal Ammunition launched Syntech Ammunition: Conventional ammunition causes metal-on-metal contact between the bullet and bore, which can shorten barrel life and rob accuracy. The polymer-encapsulated Syntech bullet prevents this, while eliminating copper and lead fouling. Combined with specialized clean-burning powders, your gun will stay cleaner, longer, so you can shoot more—and shoot better. The exclusive Catalyst primer provides the cleanest most consistent ignition possible—that’s why it received the 2017 NRA Golden Bullseye Award.

Since then, the company has greatly expanded its Syntech product offerings beyond ammo to smack targets at the range. Federal’s Syntech ammunition now include several training, personal defense, competition and specialty options.

**Today’s Syntech Lineup**

The original 2017 product launch of Federal’s Syntech Range ammunition included 9mm Luger 115-grain; 40 S&W 165-grain; and 45 Auto 230-grain.

In 2018, the company expanded the product line by introducing a 9mm Luger 124-grain option. In that same year, Federal introduced Syntech Action Pistol.

In 2019, Federal introduced Syntech Defense, Syntech Pistol Caliber Carbine (PCC) and Syntech Training Match.

In 2020, Federal added a 147-grain, 38 Special load to the original Syntech Range product line. Combination packs that paired Syntech Training Match with HST Personal Defense together as one product were created. Federal also introduced Solid Core which is a Federal Premium-branded product featuring hard cast bullets that utilize Syntech technology.

New Practice & Defend Packs pair self-defense loads proven by law enforcement with ballistically identical training ammunition for a combination like no other. These convenient combo packs include 50 HST Personal Defense loads and 50 Syntech Training Match rounds. All produce identical velocities, trajectories and point of impact for the most realistic training and utmost protection. It is available in four product options including two options in 9mm Luger, plus an option in 40 S&W and 45 Auto.

New Federal Premium Solid Core can take down anything from hogs to bears. The all-new line of handgun loads hits game harder with a tough, flat-nose lead bullet that holds together while blowing through bone, providing high weight retention and deep penetration. Syntech polymer jacket technology reduces the friction and leading that plague hard cast bullets. This deep-penetrating, hard bullet holds together while blowing through bone. It is intended for hunting, and as protection against dangerous animals. Available in 6 offerings ranging from 9mm Luger to 44 Rem. Magnum.

Syntech Action Pistol is specifically designed for the action shooting sports and loaded to power factor requirements with heavy, flatter-nosed bullets for more reliable knock-downs on steel targets in competition. Syntech Action Pistol is offered in 9mm Luger 150-grain; 40 S&W 205-grain; and 45 Auto 220-grain.

Syntech Defense provides dynamic terminal performance with a hollow-point bullet that separates into three segments and a deep-penetrating core on impact. The core penetrates 12 to 18 inches through bare ballistics gel and heavy clothing—a critical benchmark in self-defense situations and the best terminal performance of any round in its class. The segments create three secondary wound channels, each more than 6 inches deep, adding to the terminal effect. Syntech Defense is available in 9mm Luger 138-grain; 40 S&W 175-grain; and 45 Auto 205-grain.

Syntech PCC is built to meet the exhaustive demands of fast-pace Pistol Caliber Carbine competitions, with flawless function in carbine platforms. Velocity and accuracy are optimized for long gun barrel lengths, with a bullet profile that provides excellent accuracy and reliable feeding in a variety of carbine platforms. Syntech PCC is offered in 9mm Luger 130-grain.

Syntech Training Match, loads that offer the same velocity, trajectory and point of impact as equivalent Federal Premium Personal Defense HST and Tactical HST duty ammunition. Syntech Training Match is available in 9mm Luger 147-grain; 9mm Luger 124-grain; 40 S&W 180-grain; and 45 Auto 230-grain.

Finally, handloaders can also get the benefits of the same groundbreaking design in Syntech component bullets for target ammo, as Federal sells its Range components separately. Range bullets for reloaders are available in 9mm .355” 115-grain, 40 cal. .400” 165-grain, and 45 cal. .451” 230-grain.

**New Tech, New Shooters**

Senior Product Line Manager Mike Holm said Syntech, a product that took years to make, and was created for two important reasons.

“We’re proud of the consistency and performance our target loads have always offered, but we didn’t just want to follow the industry, hit a certain plateau, and stop striving for something more. So we stepped up and asked ourselves what we could do to make the shooting experience better.”

The changing demographic of today’s shooter was another important motivator.

“We know that someone who started shooting a handgun in the past few years generally has different wants and needs than established shooters,” Holm said. “In a lot of ways, they’re more critical and do more research. They ask questions that push us to do more too, especially for those who might not be quite as comfortable with guns or do most of their shooting at indoor ranges.”

Engineers tackled these varied challenges head-on while developing Syntech, and in the process created something extraordinary—not only the ammunition itself but also the technologies that define it.

It all centers on the exclusive Syntech Total Synthetic Jacket, a complete polymer coating that takes the place of the copper jacket in conventional FMJ target ammunition. The technology rewrites the book on what shooters should expect and demand from range ammunition.

**Smooth, Clean and Cool**

Syntech is cool—literally. Unlike conventional lead or copper-jacketed rounds, the slick, red polymer coating eliminates metal-on-metal contact in the barrel. The result is not only softer, smoother shooting you can feel, but less friction, heat and barrel wear. Shooters—especially those who burn through a lot of rounds at the range—will get more longevity out of their hard-earned handgun investment.

In fact, the Syntech coating produced an average of 12 percent less friction in the barrel than a standard copper jacket, when tested by Federal Premium engineers using standard testing methods and Federal’s American Eagle pistol ammunition (AE45A, 45 Auto, 230-grain FMJ). Another Syntech test revealed an average of 14 percent less heat. The heat test was conducted using Federal American Eagle pistol ammunition (AE9DP, 9mm Luger, 115-grain FMJ) and a common, conventional, full-size handgun.

The next thing a shooter will likely notice after putting a few magazines of Syntech through their gun is what they’re *not* seeing—copper or lead fouling.

“We don’t like to admit it, but nobody likes to clean their gun, and Syntech eliminates a big part of what makes a firearm dirty in the first place,” said Senior Product Development Engineer John Swenson. “Not only does the Syntech jacket encapsulate the lead core, but that coating maintains its integrity at ignition, down the barrel and in flight.”

With no exposed lead or copper, there’s no contact between these materials and the barrel, so there’s no metal fouling. Period. You’ll have to service your gun less frequently and you’ll shoot better in the meantime.

The need to clean is further reduced by the loads’ special clean-burning propellant paired with all-new lead-free Catalyst primer technology.

“The new primer is hot, consistent, and provides extremely reliable ignition,” said Chief Chemist Joel Sandstrom. This results in a more complete and efficient burn of the propellant, which significantly reduces residue with each shot.

**Safety Matters**

Range shooters often take for granted the physics involved in shooting a jacketed bullet into a hard target mere paces away. The reality is that pieces of the copper jacket and larger fragments of the lead core travel far from a target on impact—sometimes more than 15 yards. But with no hard copper jacket and a soft lead core, Syntech produces less of this splash back, and what it does produce travels shorter distances when fired into steel targets. Testing done by Federal Premium engineers proves this point.

“We set up a test where a shooter fired 100 rounds each of common, commercial, 115-grain FMJ, TMJ and Syntech from a distance of 23 feet into a steel target,” Swenson said.

For the test, Swenson and his team covered a 15-plus-yard radius in front of the target with a giant tarp, on which they’d marked 5-, 10- and 15-yard circles. After shooting each type of ammunition, they collected bullet fragments in the 10- and 15-yard marked areas, and weighed and analyzed what was there.

“What we found says it all,” he said. “Not only did Syntech put out less overall weight in recoverable fragments than typical FMJs, but most of those fragments were smaller and traveled shorter distances after hitting the steel.”

The test data was clear. Syntech produced 51 percent less total recoverable fragment weight than FMJs between 5 and 15 yards of the target. It also resulted in 91 percent less weight in fragments traveling more than 15 yards from the target, and at least 77 percent less in fragments weighing more than 10 grains.

**Experience the Difference**

There will always be practical applications for conventional copper jacketed target rounds like those you’ll find from Federal. This ammunition remains an affordable choice for accurate, reliable practice and training. But with range time so precious to us, it only makes sense to choose ammunition that makes that time more fun and more productive, with less hassle and cleanup afterward.

“It’s all about having a better shooting experience,” said Holm. “With Syntech, you have it—more of what all shooters want, and less of what you don’t.”

Learn more about all of Federal’s Syntech products, visit: [www.federalpremium.com](http://www.federalpremium.com).

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