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Magnum Revolver Loads with Alliant Power Pro 300-MP

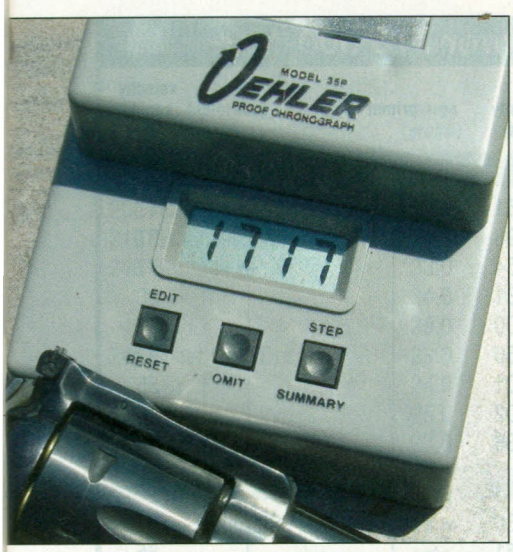
FROM THE HIP

by Brian Pearce

Alliant Powder is offering a new propellant known as Power Pro 300-MP that is spherical (or ball) and designed primarily for straight-walled magnum revolver cartridges such as .357, .41, .44, .454 Casull and similar cartridges, but likewise performs well in .22 Hornet and .218 Bee. There are already many great slow-burning revolver powders. Notable performers include Hodgdon H-110 (the same powder as Winchester 296), Lil'Gun, Ramshot Enforcer, Accurate No. 9 and 4100, not to mention proven extruded powders such as Alliant 2400 and Vihtavuori N110. To compete in this crowd, the new Alliant powder will have to perform exceptionally.

Alliant PP 300-MP is manufactured in the U.S. by St. Marks Powders and is slower burning than any of the above-mentioned powders, thus thrives in magnum revolvers with long barrels. Many propellants start as a commercial product only available to ammunition manufacturers, then get renamed as canister powders available to handloaders. According to Alliant sources, it is brand new and intended specifically for the handloading market. As this is written, at least three manufacturers are impressed with the performance offered by PP 300-MP and are considering it for use in factory ammunition.

In discussing the characteristics of PP 300-MP with Alliant's Dick Quesenberry and Ben Amonette, it seems the Federal Cartridge laboratory developed select handloads using standard primers rather than magnum designs. Knowing that switching to a magnum primer would change pressures, data in the accompany table was developed with standard primers, with the exception of the .327 Federal Magnum and .454 Casull, which were capped with the CCI 550 and Remington 7½ primers, respectively. At this point it is unknown exactly how much changing to

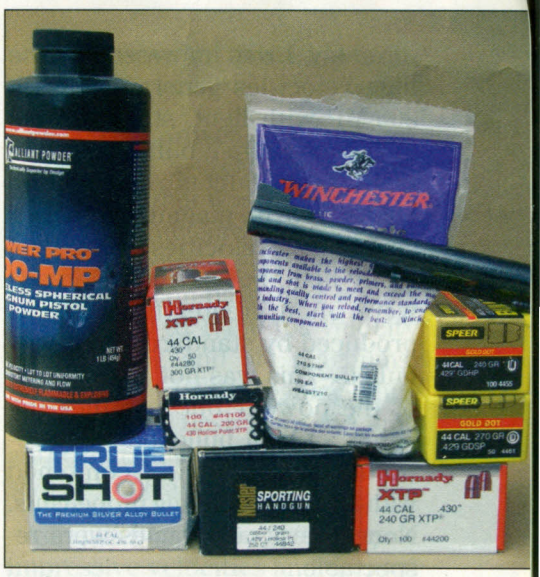


In the .44 Magnum, Power Pro 300-MP pushed the 200-grain Hornady HP-XTP bullet over 1,700 fps.

magnum primers will affect pressures, so it is suggested to use data exactly as shown.

This raises the question if standard primers will give proper ignition in extremely cold weather? At this point no one has been able to answer that question to my satisfaction, therefore I will do some additional testing in a few months (during the next Idaho winter) and report the results. Samples will be taken to a lab to further determine the effects of standard versus magnum primers on pressure.

Like most spherical/ball powders, metering was excellent with no important weight variance with thrown charges. One of the first observations (and concerns) was the bulky nature of PP 300-MP. Many loads were compressed and included appropriate powder charges with light and heavy-for-caliber bullets. This was a concern, as it is not normally a good idea to compress spherical powders in handguns, as pressures can become erratic. In discussing this matter with the folks in the lab, however, it seems this new powder was not sensitive to compression. They carefully checked for erratic pressure curves or velocities, but none was detected. In studying loads, cases, primers, chronograph tape (as well as my notes) from data in the accompanying table, there was no indication that compressed powder charges produced erratic pressures or extreme spreads.



Using Power Pro 300-MP, Brian tried a variety of bullet weights in the .44 Magnum.

Frankly, I was impressed by the high velocities generated by PP 300-MP with light, standard and heavy-for-caliber bullet weights. Lightweight bullets pose certain challenges in magnum revolver cartridges. Velocities were generally high, but extreme spreads were often greater than figures produced by standard and heavy bullets. This was not a reflection of the powder but is rather the nature of light bullets [*lower sectional density* – Ed.] combined with ultraslow-burning propellants. Nonetheless, accuracies were respectable.

With standard weight bullets, PP 300-MP began to shine, as it offered strong velocities and accuracy. For example, from a Ruger GP100 .357 Magnum revolver fitted with a 6-inch barrel, the Sierra 158-grain JSP reached 1,405 fps using 18.5 grains of powder and produced an extreme spread of 30 fps. From a sandbag rest, this load proved accurate with five shots clustering under one inch. Switching to a Lyman 160-grain cast hollowpoint bullet from mould 358156 (with gas check), the same powder charge reached over 1,550 fps, while yielding pressures that are within SAAMI pressure guidelines for the cartridge. Similar high performance was observed with standard weight bullets in the .327 Federal Magnum, .41 and .44 Magnums and .454 Casull. In the .44 Magnum, the Hornady 240-grain HP-XTP reached 1,491 fps with 25.0 grains of powder and had an extreme spread of 11 fps. Even more impressive, this load cut a ragged hole at 25 yards from a sandbag rest.

PP 300-MP produced particularly notable performance when matched to heavyweight bullets. For instance, in a .41 Magnum (stainless steel Ruger Blackhawk Bisley with a 5½-inch barrel), it scooted Mt. Baldy 226-grain Keith-pattern bullets 1,440 fps and the Oregon Trail 265-grain wide-nose flatpoint (WNFP) TrueShot cast bullets 1,277 fps.

Handloads with Power Pro 300-MP

bullet (*grains*)	charge (*grains*)	velocity (*fps*)	primer	case	velocity spread (*fps*)
.327 Federal Magnum:					
90 Sierra JHC	13.0	1,451	CCI 550	Federal	47
	14.0	1,498			37
	15.0	1,554			77
100 Speer JHP	12.5	1,331			30
	13.5	1,400			37
	14.5	1,460			32
115 Speer Gold Dot	12.5	1,301			55
	13.5	1,402			50
	14.0	1,436			48
.357 Magnum:					
125 Speer JHP	20.0	1,360	Federal 100	Starline	91
	21.0	1,451			85
	22.3	1,569			67
140 Hornady HP-XTP	18.5	1,371			42
	19.5	1,455			55
	20.5	1,549			52
158 Sierra JSP	17.0	1,253			53
	18.0	1,335			45
	18.5	1,405			30
160 Lyman 358156 HP	16.5	1,420			33
	17.5	1,475			30
	18.5	1,556			8
.41 Magnum:					
175 Winchester Silvertip HP	22.0	1,227	CCI 300	Starline	68
	23.0	1,298			55
	24.0	1,353			42
210 Speer Gold Dot HP	21.0	1,275			22
	22.0	1,320			28
	23.0	1,380			10
226 Mt. Baldy Keith cast	21.0	1,347			36
	22.0	1,379			41
	23.0	1,440			40
265 O.T. TrueShot WNFP	18.0	1,152			30
	19.0	1,229			35
	20.0	1,277			60
.44 Magnum:					
200 Hornady HP-XTP	27.0	1,570	CCI 300	Starline	155
	28.0	1,635			146

(Continued on next page.)

Handloads with Power Pro 300-MP (Continued from previous page.)

bullet (grains)	charge (grains)	velocity (fps)	primer	case	velocity spread (fps)
.44 Magnum:					
200 Hornady HP-XTP	29.0	1,706	CCI 300	Starline	60
210 Winchester Silvertip HP	28.5	1,646			43
240 Hornady HP-XTP	23.0	1,402			28
	24.0	1,440			31
	25.0	1,491			11
240 Speer Gold Dot HP	23.0	1,389			23
	24.0	1,423			33
	25.0	1,480			20
240 Nosler HP	23.0	1,415			37
	24.0	1,454			35
	25.0	1,502			28
250 Mt. Baldy Keith cast	24.0	1,270			40
	25.0	1,315			32
	25.0	1,339			54
270 Speer Gold Dot SP	20.0	1,157			27
	21.0	1,201			20
	22.0	1,261			54
300 Hornady HP-XTP*	20.0	1,321			11
	21.0	1,397			22
	22.0	1,434			16
310 O.T. TrueShot WNFP	20.0	1,468			39
	21.0	1,489			44
	22.0	1,521			67
.454 Casull:					
260 Nosler Partition HP	29.0	1,468	Remington 7½	Starline	27
	30.0	1,540			39
	31.0	1,555			77
300 Speer Gold Dot HP	29.0	1,450			46
	30.0	1,522			40
	31.0	1,552			50
360 O.T. TrueShot WNFP	26.0	1,473			13
	27.0	1,500			22
	28.0	1,556			32
	28.5	1,588			24

* Cartridge overall loaded length is 1.735 inches.

Notes: The .327 Federal Magnum loads were fired in a USFA Sparrow Hawk with a 7½-inch barrel. A 6-inch barreled Ruger GP100 was used to fire the .357 Magnum loads. The .41 Magnum loads were fired from a Ruger Bisley with a 5½-inch barrel. The .44 Magnum loads were fired from a 7½-inch barreled Ruger Bisley. A Freedom Arms Model 83 with a 7½-inch barrel was used to fire the .454 Casull loads.

Be Alert – Publisher cannot accept responsibility for errors in published load data.

In a .44 Magnum Ruger Blackhawk Bisley with a 7½-inch barrel, 25.0 grains pushed a Nosler 240-grain JHP an impressive 1,502 fps, while 22.0 grains pushed a Hornady 300-grain HP-XTP with an overall cartridge length of 1.735 inches 1,434 fps and had an extreme spread of just 16 fps. The same powder charge generated 1,521 fps with Oregon Trail 310-grain TrueShot cast bullets.

In the .454 Casull, Oregon Trail 360-grain WNFP cast bullets reached 1,588 fps using 28.5 grains of powder.

Incidentally, PP 300-MP is the only powder I have tried that made it possible to duplicate and exceed .327 Federal Magnum factory loads, which uses a proprietary powder, with 115-grain bullets.

PP 300-MP proved clean burning, leaving only a slight film of powder residue that was very fine and should not adversely affect accuracy. In shooting several hundred rounds of plain-base, cast bullets in the 1,200 to 1,450 fps velocity range in .41 and .44 magnums, there was very little leading. Muzzle report and flash were certainly authoritative but were not excessive or unpleasant.

Alliant's Power Pro 300-MP gave impressive velocities and seemed to awaken and renew the "magnum" in these cartridges while staying within industry pressure guidelines. It also yielded notable accuracy with a variety of bullet weights. Clearly it has earned a place on my bench. •