LEGEND POWDER

PRECISION AND RELIABILITY IN EVERY ROUND.

RELOADING MANUAL

Volume 01 2016-2017

INTRODUCTION

The GBW Cartridge LEGEND Reloading Guide for centerfire ammunition was created as a manual for reloading LEGEND branded propellants. LEGENDS branded propellants are imported from the Czech Republic where they are manufactured by EXPLOSIA Company and sold under the brand LOVEX. GBW Cartridge distributes these propellants under agreement with Shooters World, the authorized importer of EXPLOSIA propellants. These reloading propellants were specially selected to cover a wide range of usage in commonly loaded calibers.

POWDER INFORMATION

EXPLOSIA manufactures two basic types of reloading powders – single base and double base powders. The powders are manufactured in the forms of flake, disc, tubular and spherical particles. Propellants also vary by density; high density propellants for rifle applications, low density propellants for pistol and shot shell applications.

SINGLE BASE POWDERS

While GBW Cartridge is not currently offering a Single Base Powder, new product plans do include it, so we are providing this information for reference. Nitrocellulose is the main component (90 - 98 %) of single base powders. Additives such as stabilizers, burn rate modifiers, and muzzle-flash reducing agents are used as well. Most single base propellants produced by Explosia® are surface coated to achieve the progressive burning.

DOUBLE BASE POWDERS

In addition to nitrocellulose, double base powders also contain nitroglycerin (8 - 23 %) as an energetic modifier. These powders contain a small percentage of stabilizers or other additives similar to the single base powders. Double base powders are normally of higher energetic value than single base powders and their ballistic performance is normally better. Progressive burn is achieved by placing burn rate modifiers in a gradient fashion within the propellant grains.

Handgun double base powders: LEGEND 323, LEGEND 372, and LEGEND 367

Rifle double base powders: LEGEND 632 and LEGEND 731

While LEGEND propellants are supported with SAAMI reload data, EXPLOSIA's LOVEX branded propellants are supported by European CIP reload data. The main difference between CIP data and SAAMI standardization has to do with barrel length. CIP barrel length standards and SAAMI barrel length standards do not necessarily correspond. Therefore, the velocities reported in the Lovex Reloading Guide may not directly relate to US standards. As is always the case, any reloader should start the load development process at a safe "starting charge", and slowly increase charge weights to desired performance levels. Never exceed a maximum published load.

Estimated Internal ballistic computation of different calibers /ammunition / powder combinations can be performed with QUICKLOAD software (author Hartmut Broemel, Babenhausen, Germany). GBW Cartridge does not warrant the safety of Quickload maximum loads, but does recognize the Quickload software tool as a good estimator of starting loads and theoretical ballistic output. As with any reloading endeavor, the elimination of risk should be foremost on the loaders mind. To that end, loaders should gradually increase charge weight from the starting load. Watch for any signs of pressure, and consider any pressure warning signs as a potential maximum load.

POWDER DESCRIPTIONS

LEGEND 323 is a fast burning, low density, double-base, spherical propellant, with applications similar to 231, HP-38, Clays, Titegroup, Bullseye, and Accurate No 2. It works well in almost all handgun cartridges with cast or jacketed projectiles, especially where low residue is desirable. This propellant achieves standard velocity in .45 Auto, .40 S&W, and 9mm. Good for reduced loads in magnum cartridges.

LEGEND 372 is a high density, double base, spherical propellant, with applications similar to Accurate No. 9, 2400, H110 and 296. This propellant is most suitable for magnum pistol applications, as well as the .300 Blackout with supersonic light-weight projectiles. This propellant yields excellent velocities for the pressures generated, with less muzzle flash than other comparable powders. It is intended for use in large capacity handgun cartridges (.357 Magnum, .41 Magnum, .44 Magnum and .454 Casull).

LEGEND 367 is perhaps the most versatile of all propellants across the .380 Auto, 9mm Luger, .40 Smith & Wesson, .38 Special, 38 Super, and .45 Automatic cartridges. It provides more reliable ignition and consistent velocity than competitors' propellants of similar gas generation rates. The consistency of charging, deterrent location, burn rate and quality assurance testing of this propellant have proven to contribute to superior accuracy.

LEGEND 632 is a high density, double base, spherical propellant, with applications similar to Accurate 1680. Suitable for 7.62 x 39, .300 Blackout, .30-30 Winchester, .22 Hornet, heavy magnum pistol calibers, and some straight-walled rifle cartridges. It is also suitable for the .222 Remington and the .223 Remington with lighter bullets.

LEGEND 731 is a high density, double base, spherical propellant, and is appropriate for low residue, low-flash ammunition in .223 Remington, 5.56mm, .308 Winchester, 7.62mm, 6.8 SPC, and .30-30 Winchester. This propellant is cleaner than 748, BLC (2), H335, surplus WC 844, and has high utility. It can meet 55 and 62-grain 5.56mm velocity and pressure specification, as well as meet the velocity and pressure specification for 175 grain .308 long-range target ammunition. Despite its low charge weight, it has been proven to yield sub-MOA accuracy, at distance, in the 175 grain .308 loads. It provides ample port pressure to operate AR-type and "op-rod" type firearms, as well as ample impetus to operate roller-lock operating mechanisms.

SAFETY AND HEALTH PRECAUTIONS

- DO NOT SMOKE WHERE POWDER IS STORED AND WHEN RELOADING.
- KEEP POWDER AWAY FROM ELECTRICAL MACHINERY, THAT COULD PRODUCE SPARKS AND KEEP IT AWAY FROM OTHER COMBUSTIBLE MATERIALS OR FLAMMABLE LIQUIDS.
- STORE IN A COOL, DARK AND DRY PLACE. STORAGE CABINETS SHOULD BE SELF VENTING, ALLOWING COMBUSTIBLE GASES TO ESCAPE AND (IF POSSIBLE) SHOULD BE CONSTRUCTED OF INSULATING MATERIALS TO PROTECT POWDERS FROM HEAT.
- KEEP POWDER OUT OF REACH OF CHILDREN.
- DO NOT MIX POWDERS OF DIFFERENT KINDS.
- POUR OUT ONLY THE AMOUNT OF POWDER NEEDED FOR IMMEDIATE WORK.
- CHECK THE POWDER MEASURE EACH TIME IT IS USED. MAKE SURE THE SETTINGS HAVE NOT BEEN ACCIDENTALLY CHANGED, AND CHECK-WEIGHT “THROWN CHARGES” FREQUENTLY.
- CLEAN UP SPILLED POWDER. USE A BRUSH AND DUST PAN. DO NOT USE A VACUUM CLEANER.
- DO NOT REPACKAGE. STORE POWDER ONLY IN ITS ORIGINAL CONTAINERS. DO NOT USE THE CONTAINERS TO STORE OTHER POWDERS AND MATERIALS OR FOR OTHER PURPOSES.
- DO NOT KEEP OLD OR SALVAGED POWDERS. CHECK OLD POWDERS FOR DETERIORATION REGULARLY.
- OBEY ALL REGULATIONS AND LEGISLATION REGARDING QUANTITY AND METHODS OF STORING VALID IN YOUR COUNTRY. DO NOT STORE ALL YOUR POWDERS IN ONE PLACE. IF POSSIBLE, MAINTAIN SEPARATE STORAGE LOCATIONS. MANY SMALL CONTAINERS ARE SAFER THAN ONE OR MORE LARGE CONTAINERS.
- DO NOT TAKE INTERNALLY. IN CASE OF INGESTION, CAUSE VOMITING BY PUTTING FINGER DOWN THROAT. CONTACT A PHYSICIAN IMMEDIATELY.
- PREVENT CONTACT WITH FOOD, CHEWEING, AND SMOKING MATERIALS.
- ENSURE ADEQUATE VENTILATION DURING HANDLING.
- DO NOT CARRY POWDER IN CLOTHING.

SAFE STORAGE OF SMOKELESS POWDER FOR SMALL ARMS

Smokeless propellant is flammable. It will ignite by means of heat, spark, static discharge, or friction. It burns with high intensity. When confined, the burning intensity increases.

The standard plastic bottle containers supplied with Smokeless Powder for Small Arms are proper storage containers and present no confinement hazard. Keep your propellant away from heat, spark, static discharge and any other ignition sources.

Ensure that propellant is stored in its original container, and properly labeled. Due to the chemical nature of Smokeless Powder for Small Arms, contact can cause reaction and degradation with certain materials. These may include PVC, Styrofoam, LDPE, wood, and other organic materials.

Smokeless propellant is a type of plastic. Anything that degrades plastic will degrade propellant. This includes heat, direct rays of the sun, and solvents.

Smokeless propellant can degrade over time. Degradation is accelerated by storage at high temperatures. Propellant can remain stable in excess of 20 years when stored at 70° Fahrenheit. Normal degradation causes a decrease in energy output. In rare circumstances, degradation can also cause instability and auto-ignition.

Shooters World, LLC recommends that stored propellant be regularly examined. Evidence of degradation includes a red/rusty tinge on propellant grains, and A STRONG NOXIOUS/ACRID ODOR, HIGHLY OFFENSIVE TO THE NOSE. This acrid odor can be closely duplicated by subjecting rusty metal to a bath in muriatic acid. The fumes produced are highly offensive to the nose. Note: The sweet smell of solvents (a by-product of manufacturing) should not be confused with a noxious odor.

All smokeless propellant has an affinity for moisture. Moisture contamination will change your ballistic results (charge weight, velocity, pressure and accuracy). Keep your powder dry. Keep storage bottles capped tightly. Do not store propellant for extended periods in a powder hopper. Return propellant to its original container when your loading session is complete.

National Fire Protection Association guidelines permit storage of “Smokeless Powder for Small Arms” in residences, up to a certain quantity. Check your local ordinances to ensure regional compliance.

Occasionally, propellant must be disposed of. Quantities of unburned propellant can be known as aquatic pollutants. To prevent potential water pollution, Shooters World, LLC recommends that the disposal of waste propellant be conducted by remote incineration.

Shooters World, LLC recommends further information at:

http://www.saami.org/specifications_and_information/publications/download/SAAMI_ITEM_200-Smokeless_Powder.pdf

!!!WARNING!!!

READ BEFORE USING

The task of reloading centerfire metallic cartridges should only be undertaken by someone familiar with reloading procedures. One must observe all possible safety precautions and practices in accordance with proper handling of any explosive. We suggest you read up on reloading procedures. There are a number of excellent books on the subject.

After powder leaves our plant, we have no control over improper storage, handling, loading or using or on the condition of firearms or component use. For these reasons we make no warranty of merchantability or fitness for a particular use. All our loading data is intended solely for use in modern weapons.

Working up charges: Every rifle, pistol and shotgun is different. Variability in manufacturing of firearms and their ammunition components create varying pressures. Shooters World has provided recommending starting charges, which should be safe in every modern, correctly manufactured, and maintained firearm of the appropriate caliber. It is incumbent upon the reloader to progress in a safe manner. Always start a load development with the recommended starting propellant charge. Upon working up the load to higher pressures, never exceed the published recommended maximum charge weight. Variation from the published loading length can and will create dangerous pressures. Watch for any signs of excessive pressure (difficult extraction, flattened or pierced primers, unusual recoil), and immediately STOP shooting if any high pressure signs are witnessed.

ALWAYS START AT THE SUGGESTED MINIMUM STARTING CHARGE AND NEVER EXCEED THE LOADS LISTED IN THIS PUBLICATION.

BURN RATE CHART

Sequenced from Fast Burning (Top) to Slow Burning (Bottom)

GBW Cartridge	Shooters World	Western Powders	Hodgdon Powders	Winchester Propellants
LEGEND 323	Clean Shot	Accurate® No 2	TITEGROUP®	231
LEGEND 367	Ultimate Pistol			Autocomp
			LONGSHOT®	
LEGEND 372	Heavy Pistol	Accurate® No 9		
			LIL'GUN®	
			H4198	
LEGEND 632	Blackout	Accurate® 1680		680
	AR Plus	Accurate® 2200		
LEGEND 731	Tactical Rifle	Accurate® 2230	H335®	
		Accurate® 2460	BL-C(2)®	748
			LEVERevolution®	
	Match Rifle	Accurate® 2520	CFE 223	

RELOADING DATA

LEGEND 323 PISTOL POWDER RELOAD DATA

Caliber	Case	Projectile	Load Length	Starting Charge	Starting Velocity	Max Charge	Max Velocity	Max Pressure
.380 Auto	Jagemann	75 gr Sinterfire FP	0.95	4.0	862	4.5	1000	20,196
	Jagemann	90 gr Hornady XTP	0.965	2.3	750	3.0	977	21,400
	Jagemann	95 gr Sierra FMJ	0.945	2.6	761	3.0	932	21,375
9mm Luger	Speer	90 gr Hornady XTP	1.085	4.4	1162	5.4	1325	34,920
	Winchester	100 gr Sinterfire FN	1.14	3.8	1020	5.1	1224	33,500
	Jagemann	115 gr Berry RN	1.16	3.6	951	4.7	1136	34,720
	Winchester	115 gr Winchester FMJ	1.16	4.0	978	4.7	1130	34,680
	Jagemann	115 gr Hornady XTP	1.075	4.0	1005	4.5	1090	35,000
	Jagemann	124 gr Nosler JHP	1.1	3.2	900	4.4	1063	34,985
	Jagemann	124 gr Hornady XTP	1.06	3.4	915	4.2	1064	33,420
.38 SPL	Jagemann	110 gr Sierra JHP	1.455	3.7	525	5.0	1158	17,000
	Jagemann	125 gr Hornady XTP	1.455	3.0	660	4.6	1035	17,000
	Jagemann	125 gr Speer TMJ	1.455	2.6	636	4.5	1052	16,495
	Jagemann	140 gr Hornady XTP	1.455	2.9	545	4.3	937	17,000
	Jagemann	140 gr Sierra JHP	1.455	2.9	501	4.3	921	16,876
	Jagemann	158 gr Sierra JSP	1.455	2.9	546	3.8	786	16200
	Jagemann	158 gr Hornady XTP	1.455	2.9	568	3.8	740	16607
	Jagemann	158 gr Nosler JHP	1.455	3.0	591	3.8	839	16748
.40 S&W	Remington	135 gr Sierra JHP	1.125	6.0	1132	6.6	1225	34,400
	Remington	150 gr Sierra JHP	1.125	5.5	1012	6.1	1119	34,722
	Remington	155 gr Hornady XTP	1.125	5.2	1000	5.8	1100	34,706
	Remington	180 gr Sierra JHP	1.125	4.4	842	4.8	934	35,000
	Remington	180 gr Extreme	1.125	4.4	804	5.3	960	34,400
.45 Auto	Winchester	155 gr Sinterfire FP	1.21	5.0	935	5.9	1100	20,055
	Jagemann	185 gr Zero JHP	1.21	4.8	784	6.3	1029	21,000
	Jagemann	185 gr Hornady XTP	1.21	4.5	816	5.8	1020	19,950
	Jagemann	200 gr Hornady XTP	1.21	5.0	825	5.6	988	20,630
	Winchester	230 gr WinchesterRN	1.2	4.5	747	5.3	899	19,900
	Jagemann	230 gr Hornady XTP	1.21	4.3	724	5.1	870	20,530
	Jagemann	230 gr Nosler FMJ	1.2	4.0	720	5.1	870	19,500

RELOADING DATA

LEGEND 367 PISTOL POWDER RELOAD DATA

Caliber	Case	Projectile	Load Length	Starting Charge	Starting Velocity	Max Charge	Max Velocity	Max Pressure
.380 Auto	Jagemann	90 grain Sierra JHP	0.965	3.8	872	4.3	1002	20,679
	Jagemann	90 grain Hornady XTP	0.965	3.7	870	4.2	1031	19,900
	Jagemann	95 grain Sierra FMJ	0.965	3.7	835	4.0	939	20,377
	Jagemann	100 grain Berry RN	0.960	3.7	802	3.8	949	21,246
9mm Luger	Jagemann	115 grain Hornady XTP	1.075	4.7	975	5.7	1188	34,300
	Jagemann	124 grain Hornady XTP	1.060	4.3	902	5.5	1163	34,344
	Jagemann	147 grain Hornady XTP	1.100	n/a	n/a	4.5	995	34,269
	Jagemann	115 grain Winchester FMJ	1.160	4.6	927	6.4	1237	34,500
	Jagemann	124 grain Nosler JHP	1.085	4.3	878	5.6	1145	34,870
.38 SPL	Jagemann	110 grain Sierra JHP	1.450	4.0	645	6.8	1254	17,000
	Jagemann	125 grain Hornady XTP	1.455	4.0	460	6.3	1092	16,700
	Jagemann	135 grain Gold Dot	1.455	4.0	521	5.4	966	16,400
	Jagemann	140 grain Hornady XTP	1.455	4.0	665	5.6	990	16,672
	Jagemann	158 grain Hornady XTP	1.450	4.0	558	5.0	874	17,000
	Jagemann	158 grain Nosler JHP	1.450	4.0	601	5.4	961	16,699
.40 S&W	Jagemann	135 Sierra JHP	1.125	5.5	477	8.0	1303	32,300
	Jagemann	155 grain Hornady XTP	1.125	4.6	682	7.7	1232	31,800
	Jagemann	165 grain Sierra JHP	1.125	4.3	647	6.8	1139	33,900
	Jagemann	180 grain Sierra JHP	1.125	4.0	595	6.3	1049	33,500
	Jagemann	180 grain Hornady HAP	1.125	3.8	630	6.0	1027	31,800
	Jagemann	180 Hornady XTP	1.125	4.0	618	6.4	1081	34,700
.45 Auto	Jagemann	185 grain Hornady XTP	1.210	4.5	552	8.6	1095	20,100
	Jagemann	200 grain Hornady XTP	1.210	3.9	534	7.9	1025	20,618
	Jagemann	230 grain Hornady XTP	1.210	3.7	480	6.7	921	20,200
	Jagemann	230 grain Berry HP	1.210	3.7	448	7.2	940	21,000
	Jagemann	230 grain Nosler FMJ	1.210	3.7	462	7.2	935	20,100
	Jagemann	225 Cast RN 20/1	1.210	4.2	510	6.8	945	19,700

RELOADING DATA

LEGEND 372 PISTOL POWDER RELOAD DATA

Caliber	Case	Projectile	Load Length	Starting Charge	Starting Velocity	Max Charge	Max Velocity	Max Pressure
.300 Blackout	Jagemann	110 gr Hornady Vmax	2.04	16.0	2260	17.3	2458	53,600
	Jagemann	125 gr Sierra MK	2.245	13.0	1842	15.7	2172	54,225
	Jagemann	140 gr Nosler HPBT	1.925	12.2	1735	14.4	2043	54,016
.44 REM MAG	Winchester	180 gr Hornady XTP	1.600	20.0	1392	23.3	1697	35,304
	Winchester	220 gr Sierra FPJ	1.600	17.9	1299	21.0	1529	35,675
	Winchester	240 gr Nosler JHP	1.600	15.5	1080	18.8	1406	35,920
	Winchester	300 gr Hornady XTP	1.600	12.7	978	14.9	1151	35,560
.357 Magnum	Jagemann	110 gr Sinterfire	1.590	10.0	1184	13.8	1564	33,345
	Jagemann	110 gr Sierra JHP	1.590	14.0	1465	15.9	1725	34,632
	Jagemann	125 gr Speer GDHP	1.590	12.0	1255	15.3	1692	34,800
	Jagemann	140 gr Hornady XTP	1.590	11.0	1180	14.0	1501	34,917
	Jagemann	158 gr Hornady XTP	1.580	10.0	1055	12.1	1296	32,726
	Jagemann	158 gr Nosler JHP	1.590	10.0	1078	12.2	1378	34,556
	Jagemann	158 gr Berry FN	1.590	10.0	998	12.9	1359	34,425

LEGEND 632 RIFLE POWDER RELOAD DATA

Caliber	Case	Projectile	Load Length	Starting Charge	Starting Velocity	Max Charge	Max Velocity	Max Pressure
.300 Blackout	Jagemann	220 gr Sierra HPBT	2.050	n/a	n/a	10.5	1050	22,600
	Jagemann	208 Hornady A-MAX	2.210	n/a	n/a	10.2	1050	24,195
	Jagemann	150 gr Hornady FMJ	2.100	15.0	1460	18.0	1750	45,200
.44 REM MAG	Winchester	240 gr Nosler JHP	1.600	22.0	985	25.4	1138	26,800
	Winchester	300 Hornady XTP	1.595	15.0	680	19.5	881	24,600
.30-30 Win	Hornady	125 gr Sierra FN	2.425	28.0	2454	30.5	2661	40,925
	Hornady	150 gr Sierra FN	2.550	25.0	2148	27.4	2377	41,077
	Hornady	170 gr Speer HCFN	2.550	24.0	2040	25.9	2212	41,342
	Hornady	170 gr Sierra FN	2.550	24.0	2011	26.2	2193	40,669
.458 SOCOM	SBR	300 gr Barnes TTSX	2.25	35.1	1587	39.0	1767	34,128

RELOADING DATA

LEGEND 731 RIFLE POWDER RELOAD DATA

Caliber	Case	Projectile	Load Length	Starting Charge	Starting Velocity	Max Charge	Max Velocity	Max Pressure
.223 Rem	Remington	50 gr Sierra BK	2.26	22	3000	26	3471	54,932
	Remington	55 gr FMJ	2.245	17.5	2509	24.5	3241	54,699
	Remington	60 gr Hornady V-Max	2.245	17.5	2360	23.8	3097	54,643
	Remington	62 gr M855	2.245	17.5	2190	24.1	3035	54,405
	Remington	69 gr Sierra HPBT	2.245	18	2350	23	2936	53,994
.30-30 Win	Hornady	150 gr Sierra FN	2.550	28	2025	33.1	2410	41,115
.308 Win	Winchester	110 gr Speer SP	2.684	46	3075	51.1	3420	60,405
	Winchester	125 gr Sierra HP	2.81	44	2915	48.9	3241	61,225
	Winchester	130 gr Speer HP	2.688	44	2876	48.9	3198	61,402
	Winchester	147 gr FMJ	2.8	42	2710	46.7	3017	60,914
	Winchester	168 gr Sierra HPBT	2.81	39.5	2500	43	2724	61,754

Industry partners:

LEGEND brand powders are manufactured in Czech Republic by EXPOLISIA, and are imported and packaged by Shooters World, LLC.

Additional Information:

Additional information can be found at www.gbwcartridge.com or www.legendammunition.com