

22-250 ACKLEY IMPROVED

Test Specifications:

Firearm Used: Universal

Barrel Length: 24"

Twist: 1-10"

Components:

Case: Winchester

Trim-to Length: 1.900"

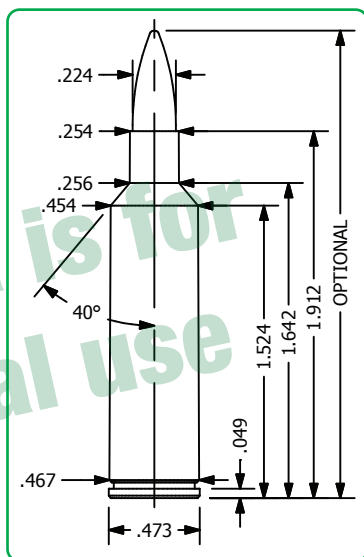
Primer: WLR

Remarks:



Despite being one of the most popular varmint cartridges, 22-250 hasn't been immune to the wildcatter's attentions. And, in this example, it isn't a bad thing either. With the gentle case taper and mild shoulder angle of the parent case, the 22-250 provides fertile ground for improvement. In the Ackley version that we chose to work with, the fire-formed case provides almost exactly the same internal capacity as that of a 220 Swift in its standard configuration. With close to a 10 percent increase in useable capacity, the improved version gives enough added velocity to make a noticeable difference in the field.


As with the other members of the improved family of cartridges, cases for the 22-250 must be fireformed before it can be reloaded in its improved configuration. With most cartridges, this process drastically reduces velocity and accuracy. Unlike some other chamberings, the 22-250 Improved has a reputation for giving very good accuracy when fireforming. Velocity usually drops by only 100 to 150 fps from that of the standard 22-250, leaving a fairly potent cartridge for casual varminting. After this initial fireforming, the improved case can be reloaded like any other.

With velocity and energy levels equaling the Swift, the 22-250 Improved offers some advantages over the older cartridge. Cases and ammunition are more readily available and usually more affordable. The Improved's more modern design also tends to reduce stretching when compared to either the Swift or the parent case. Given the enthusiasm most reloaders have for case trimming, this may be enough reason to make the conversion!







22-250 ACKLEY IMPROVED

		Bullet	Caliber	Weight	Type	C.O.A.L.						
		#1385	.224"	40gr.	HP	2.300"						
		#1440	.224"	40gr.	BlitzKing	2.400"						
Powder	Velocity	3700	3800	3900	4000	4100	4200	4300				
H4895		33.0	33.8	34.6	35.6	36.6	37.7					
IMR 4166 End.		33.4	34.7	36.0	37.2	38.3	39.3					
IMR 4064		34.4	35.4	36.5	37.7	38.9						
RE 15				37.2	38.5	39.7	40.7	41.7				
Varget			36.2	37.6	38.9	40.0	41.1					
CFE 223		38.5	39.3	40.2	41.0	41.8	42.6					
H380				40.3	41.7	43.0	44.1					
Power Pro 2000 MR			40.6	42.8	44.4	45.4						
Big Game			41.1	41.7	42.6	43.7	45.1	46.6				
Energy Ft. Lbs		1216	1282	1351	1421	1493	1566	1642				
Special Load	Powder	Grains	Velocity fps	Energy Ft. lbs								
Accuracy Load	RE 15	41.7	4300	1642								
Hunting Load	Big Game	46.6	4300	1642								

		Bullet	Caliber	Weight	Type	C.O.A.L.						
		#1310	.224"	45gr.	SPT	2.400"						
Powder	Velocity	3500	3600	3700	3800	3900	4000	4100				
H4895		31.8	33.0	34.1	35.1	36.1	36.1					
IMR 4166 End.		32.3	33.5	34.6	35.7	36.7						
IMR 4064		32.8	33.9	35.0	36.2	37.3						
RE 15			34.0	35.3	36.6	38.0	39.3					
Varget		35.1	35.5	36.1	36.9	38.0	39.2	40.7				
CFE 223		36.0	37.1	38.1	39.2	40.3	41.4					
H380		36.0	37.2	38.5	39.8	41.1	42.4					
Power Pro 2000 MR		37.9	39.0	40.0	41.0	42.0	43.0					
Big Game		35.4	36.8	38.2	39.5	40.8	42.0					
Energy Ft. Lbs		1224	1295	1368	1443	1520	1598	1679				
Special Load	Powder	Grains	Velocity fps	Energy Ft. lbs								
Accuracy Load	Big Game	42.0	4000	1598								
Hunting Load	Varget	40.7	4100	1679								

22-250 ACKLEY IMPROVED









	Bullet	Caliber	Weight	Type	C.O.A.L.
	#1320	.224"	50gr.	SMP	2.375"
	#1330	.224"	50gr.	SPT	2.400"
	#1340	.224"	50gr.	Blitz	2.400"
	#1450	.224"	50gr.	BlitzKing	2.440"

Powder ▾	Velocity >	3400	3500	3600	3700	3800	3900	4000
H4895		31.4	32.3	33.3	34.6	36.0		
IMR 4166 End.		33.5	34.9	36.2	37.3	38.3		
IMR 4064		33.0	34.2	35.3	36.4	37.5		
RE 15				35.9	37.2	38.5	39.7	
Varget				35.3	36.8	38.2	39.5	
CFE 223			35.9	37.2	38.3	39.3	40.3	
H380			37.3	38.6	39.9	41.1	42.2	
Power Pro 2000 MR			37.9	39.5	40.7	41.8	42.5	
Big Game				38.5	40.2	41.7	43.1	
N540			35.3	36.4	37.5	38.5	39.6	
IMR 4350		40.1	41.1	42.1	43.1	44.0	45.0	
IMR 4451 End.			40.0	41.6	42.9	44.0		
H4350		35.9	36.8	38.0	39.3	40.8	42.6	
RE 16			38.7	40.0	41.2	42.3	43.4	
RE 17			39.6	40.7	41.7	42.7	43.5	44.3
Energy Ft. Lbs		1283	1360	1439	1520	1603	1688	1776

Special Load	Powder	Grains	Velocity fps	Energy Ft. lbs
Accuracy Load	H380	42.2	3900	1688
Hunting Load	RE 17	44.3	4000	1776

Sierra does not recommend MatchKing bullets for hunting applications.

22-250 ACKLEY IMPROVED

Bullet	Caliber	Weight	Type	C.O.A.L.
	#1410	.224"	52gr. HPBT Match	2.445"
	#1400	.224"	53gr. HP Match	2.445"
	#1345	.224"	55gr. Blitz	2.500"
	#1350	.224"	55gr. SMP	2.460"
	#1355	.224"	55gr. FMJBT	2.415"
	#1360	.224"	55gr. SPT	2.515"
	#1365	.224"	55gr. SBT	2.500"
	#1390	.224"	55gr. HPBT	2.445"
	#1455	.224"	55gr. BlitzKing	2.525"*

*55gr BlitzKing requires a 1x12" or faster twist

Powder	Velocity	3200	3300	3400	3500	3600	3700	3800
H4895				31.0	32.2	33.4	34.8	
IMR 4064		32.3	33.5	34.7	35.9	37.2		
RE 15		33.0	34.1	35.3	36.5	37.6	38.8	
Varget				33.0	34.4	35.8	37.2	
H380		34.5	35.8	37.1	38.6	40.0		
Power Pro 2000 MR				35.0	36.8	38.5	40.0	41.2
Big Game	33.1	34.0	35.1	36.4	37.8	39.4		
N540				33.4	34.5	35.8	37.2	
IMR 4350	36.2	37.5	38.8	40.1	41.4	42.7		
IMR 4451 End.	35.3	36.6	37.9	39.3	40.7	42.1		
A 4350		36.8	38.2	39.6	41.0	42.5	44.0	
H4350				36.6	37.8	39.1	40.6	
RE 16					38.3	39.7	41.1	42.5
RE 17		35.4	36.8	38.2	39.4	40.7	41.8	
Hybrid 100V				36.8	38.2	39.6	40.9	
Energy Ft. Lbs		1182	1257	1335	1414	1496	1580	1667




Special Load	Powder	Grains	Velocity fps	Energy Ft. lbs
Accuracy Load	A 4350	44.0	3800	1667
Hunting Load	RE 15	38.8	3800	1667

Sierra does not recommend MatchKing bullets for hunting applications.



INDICATES MAXIMUM LOAD - USE CAUTION
LOADS LESS THAN MINIMUM CHARGES SHOWN ARE NOT RECOMMENDED.

22-250 ACKLEY IMPROVED




Bullet	Caliber	Weight	Type	C.O.A.L.
	#1375	.224"	60gr. HP	2.360"
	#7160	.224"	60gr. TMK	2.440"*
	#1370	.224"	63gr. SMP	2.375"

*60gr TMK requires a 1x10" or faster twist





Powder	Velocity	3000	3100	3200	3300	3400	3500	3600
H4895		27.8	28.9	30.1	31.5			
IMR 4064		28.8	30.0	31.2	32.4	33.6		
RE 15			30.3	31.6	32.8	33.9	35.0	
Varget			29.6	30.8	32.0	33.3	34.7	
H380			32.9	33.9	35.2	36.6	38.3	
Power Pro 2000 MR			31.3	32.4	33.7	35.0	36.4	
Big Game				33.4	34.8	36.3	37.9	
N540				31.4	32.9	34.4	35.8	
IMR 4350		33.5	34.8	36.1	37.4	38.8	40.2	
IMR 4451 End.		33.3	34.7	36.0	37.4	38.8	40.2	
A 4350						38.3	40.5	41.8
H4350				34.5	35.9	37.3	38.8	
RE 16			32.3	33.9	35.4	36.8	38.2	39.5
RE 17			33.1	34.1	35.2	36.5	38.0	39.6
Hybrid 100V				35.2	36.6	37.9	39.2	40.4
Energy Ft. Lbs		1199	1280	1364	1451	1540	1632	1726

Special Load	Powder	Grains	Velocity fps	Energy Ft. lbs
Accuracy Load	Power Pro 2000 MR	36.4	3500	1632
Hunting Load	A 4350	41.8	3600	1726


22-250 ACKLEY IMPROVED

	Bullet	Caliber	Weight	Type	C.O.A.L.			
	#1395	.224"	65gr.	SBT	2.360"*			
	#1380	.224"	69gr.	HPBT Match	2.490"*			
	#7169	.224"	69gr.	TMK Match	2.570"*			
*requires a 1x10" or faster twist								
Powder	Velocity	2800	2900	3000	3100	3200	3250	3300
IMR 4064		28.1	29.2	30.3	31.6	33.0		
RE 15			29.2	30.6	31.9	33.3	33.9	
Varget			29.1	30.5	31.9	33.2	33.8	
H380			31.6	32.9	34.3	35.8	36.6	
Power Pro 2000 MR				32.1	33.5	35.0	35.9	
Big Game				33.0	34.3	35.7	36.4	
IMR 4350			33.5	34.7	36.0	37.3	38.0	
IMR 4451 End.			33.4	34.8	36.2	37.7	38.4	
A 4350			31.6	33.2	34.8	36.3	37.0	
H4350	31.0	31.9	33.0	34.3	35.7	36.5		
RE 16				33.4	34.9	36.3	37.0	37.7
RE 17				33.1	34.4	35.8	36.5	37.2
RE 19				37.2	38.5	39.9	40.7	41.4
H4831sc				36.6	38.2	39.9	40.7	
IMR 4955 End.	33.2	34.5	35.8	37.2	38.6			
Energy Ft. Lbs	1131	1214	1299	1387	1478	1524	1571	
Special Load	Powder	Grains	Velocity fps	Energy Ft. lbs				
Accuracy Load	RE 15	33.9	3250	1524				
Hunting Load	RE 16	37.7	3300	1571				
<i>Sierra does not recommend MatchKing bullets for hunting applications.</i>								


22-250 ACKLEY IMPROVED

Bullet	Caliber	Weight	Type	C.O.A.L.				
	#9377	.224"	77gr. HPBT Match	2.500"*				
	#9377G	.224"	77gr. HPBT Match Cannelured	2.500"*				
	#7177	.224"	77gr. TMK Match	2.570"*				
	#9390	.224"	80gr. HPBT Match	2.520"*				
*requires a 1x8" or faster twist								
Powder	Velocity	2800	2900	3000	3100	3200	3250	3300
IMR 4064		27.2	28.6	30.1	31.7			
RE 15		27.5	28.9	30.3	31.6	33.0		
Varget			27.7	29.8	31.6			
H380		29.1	30.6	32.1	33.6			
Power Pro 2000 MR		27.9	29.3	30.9	32.4			
Big Game			31.2	32.6	34.1	35.6		
IMR 4350			30.5	32.5	34.2	35.8		
IMR 4451 End.			32.0	33.6	35.1	36.6		
A 4350			28.8	30.9	32.8			
H4350			30.1	31.7	33.3	35.0		
RE 16				32.1	33.8	35.4	36.1	
RE 17				31.9	33.5	35.0	35.8	
Hybrid 100V			31.0	32.5	33.9	35.2		
RE 19			33.6	35.3	37.0	38.7	39.6	40.4
H4831sc			33.1	35.0	37.0	38.9		
Superformance				34.8	36.8	38.3	39.0	39.6
RE 22			32.5	34.5	36.4	38.1	38.8	39.6
N560			33.0	34.8	36.6	38.5	39.4	
Energy Ft. Lbs		1340	1438	1539	1643	1750	1806	1862
Special Load	Powder	Grains	Velocity fps	Energy Ft. lbs				
Accuracy Load	RE 15	33.0	3200	1750				
<i>Sierra does not recommend MatchKing bullets for hunting applications.</i>								

22-250 ACKLEY IMPROVED

Bullet		Caliber	Weight	Type	C.O.A.L.				
	#9290	.224"	90gr.	HPBT Match	2.630"*				
*requires a 1x6.5" or faster twist		**requires a 1x7" twist @2650fps and faster							
Powder	Velocity	2650	2750	2850	2950	3000	3050	3100	
IMR 4350			30.3	32.4	34.3	35.1			
IMR 4451 End.	30.0	31.5	33.1	34.6	35.3				
H4350		29.4	31.4	33.5	34.6				
RE 16				32.2	33.7	34.5	35.4	36.3	
RE 17			29.5	31.2	33.1	34.0	34.9		
H100V			30.4	32.0	33.9	34.9	36.0		
RE 19			33.2	34.8	36.4	37.2	38.0	38.8	
H4831sc			33.2	35.0	36.8	37.7	38.6		
Superformance			33.4	35.2	36.9	37.6	38.4	39.1	
RE 22			33.9	35.2	36.7	37.5	38.3	39.1	
N560				33.8	36.1	37.2	38.2	39.3	
RE 23				35.4	37.0	37.8	38.6	39.5	
IMR 7828ssc	34.0	35.5	37.0	38.6	39.4	40.2	41.0		
H1000		35.7	37.3	38.9	39.7	40.5	41.4		
Energy Ft. Lbs	1403	1511	1623	1739	1798	1859	1920		
Special Load	Powder	Grains	Velocity fps	Energy Ft. lbs					
Accuracy Load	H4831sc	38.6	3050	1859					
<i>Sierra does not recommend MatchKing bullets for hunting applications.</i>									

22-250 ACKLEY IMPROVED

Bullet		Caliber	Weight	Type	C.O.A.L.				
	#1396	.224"	95gr.	HPBT Match	2.630"*				
*requires a 1x6.5" or faster twist									
Powder	Velocity	2600	2700	2800	2900	3000	3050	3100	
IMR 4350			30.6	32.1	33.6	35.4			
IMR 4451 End.		31.1	32.7	34.1	35.5				
H4350			30.2	31.9	33.6				
RE 16			30.1	31.7	33.4	35.3			
RE 17			30.5	31.8	33.2	34.8			
Hybrid 100V			31.1	32.5	34.1				
RE 19				35.2	37.0	38.6	39.4		
H4831sc			33.9	35.4	37.1	39.1			
Superformance				34.9	36.5	38.0	38.8		
RE 22			33.6	35.5	37.3	39.0			
N560				34.5	36.0	37.5	38.2		
RE 23			32.9	34.7	36.5	38.3			
IMR 7828ssc			33.7	35.3	36.9	38.5			
H1000				37.0	38.8	40.6	41.6		
RE 26				35.7	37.5	39.2	40.1	40.9	
Magnum				39.4	41.1	42.8			
Energy Ft. Lbs		1426	1538	1654	1774	1898	1962	2027	
Special Load	Powder	Grains	Velocity fps	Energy Ft. lbs					
Accuracy Load	IMR 4350	35.4	3000	1898					
<i>Sierra does not recommend MatchKing bullets for hunting applications.</i>									