

QuickLOAD® V.3.6 © Copyright 1987-2010 - H.Broemel, Babenhausen, Germany

WARNING: Since we have no control over equipment or data which may be used with this program, no responsibility is implied or assumed for results obtained through its use. Input data and results may be incorrect or wrong. Therefore the use of this data for loading ammunition can cause serious injury to personnel and material. The computer-results had to be checked against data available in current loading manuals.

LOT-TO-LOT VARIATIONS OF POWDERS, PRIMER SUBSTITUTION AND COMPONENT CHANGE OFTEN RAISE PRESSURES TO UNSAFE LEVELS. THE USER MUST ASSUME THE ENTIRE RISK OF USING THIS DATA FOR LOADING PURPOSES.

QuickLOAD® V.3.6.02 #130542, © Copyright 1987-2010 - H.Broemel, Babenhausen, Germany

User Data:	Date:9-Apr-2015	Time:18:39:10	File: xpert 338 win mag 185gr.dat	
Cartridge / Caliber	.338 Win Mag.	Bullet	.338, 185, XPERT TARGET M	
Maximum Average Pressure, allowed	62366 psi.	4300 bar (Piezo CIP)	with flatbase	
Groove Caliber	0.338 in.	8.59 mm	Bullet Weight	185.0 gr. 11.99 gm
Case Capacity, overflow	86.0 gr. H2O	5.584 cm ³	Bullet Length	1.441 in. 36.6 mm
Case Length	2.500 in.	63.5 mm	Bullet Seating Depth	0.634 in. 16.1 mm
Cartridge O.A. Length	3.307 in.	84.0 mm	Barrel/Tube Length	26.0 in. 660.4 mm
Shot Start / Init Pressure	3625 psi.	249.94 bar	Cross Section Area of Bore	0.08827 in. ² 0.5695 cm ²
Propellant type	Somchem S365			
Charge Weight	67.99 gr.	4.406 gm	Load Density	239.7 gr./in. ³ 0.948 gm/cm ³
Heat of Explosion, Potential	238.8 J/gr.	3685 J/gm	Energy Density of Charge	57224 J/in. ³ 3492 J/cm ³
Propellant Solid Density	404.63 gr./in. ³	1.6 gm/cm ³	Used Ratio of Specific Heats cp/cv	1.239
Burning Rate Factor Ba	0.44 1/s		Weighting Factor	0.5
Burning Function Limit Z1	0.605		Prog.-/ Degressivity Factor a0	1.715
Factor b	2.271		Bulk Density	231.4 gr./in. ³ 0.915 gm/cm ³

Calculated and Estimated Data:

Bullet Shank Seating Depth	0.634 in.	16.1 mm	Capacity Displaced by Seated Bullet	0.0571 in. ³ 0.935 cm ³
Useable Case Capacity	0.2837 in. ³	4.649 cm ³	Bullet Travel at Muzzle Exit	24.13 in. 613.0 mm
Loading Ratio("Density") / Filling	103.6 % = compressed		Charge Fraction Burnt at Shot Start	1.22 %

Predicted Data:

Maximum Chamber Pressure	46367 psi.	3197 bar	Bullet Travel at Pmax	1.97 in. 50.1 mm
at Muzzle Exit:				
Bullet Velocity	2937 fps.	895.2 m/s	Pressure at Muzzle	8367 psi. 577 bar
Bullet Energy	3544 ft.lbs.	4805 Joule	Bullet Barrel Time	1.259 ms
Propellant Burnt	99.8 %		Ballistic Efficiency	29.6 %

Check Loading Manuals for Safe Minimum Charge Weight to Avoid Hazardous Ignition Conditions like Secondary Explosion Effects !
 Real maximum (peak) of pressure is reached while bullet moves within barrel.
 End of combustion occurs after the bullet's base passes muzzle.

