

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:17:38:44	File: xpert 308 win 130gr.dat	
Cartridge / Caliber	.308 Win.	Bullet	.308, 130GR XPERT TARGET	
Maximum Average Pressure, allowed	60191 psi.	4150 bar (Piezo CIP)	with flatbase	
Groove Caliber	0.308 in.	7.82 mm	Bullet Weight	130.0 gr. 8.42 gm
Case Capacity, overflow	56.0 gr. H2O	3.636 cm ³	Bullet Length	1.236 in. 31.4 mm
Case Length	2.014 in.	51.16 mm	Bullet Seating Depth	0.534 in. 13.56 mm
Cartridge O.A. Length	2.717 in.	69.0 mm	Barrel/Tube Length	24.0 in. 609.6 mm
Shot Start / Init Pressure	3625 psi.	249.94 bar	Cross Section Area of Bore	0.07364 in. ² 0.4751 cm ²
Propellant type	Somchem S341			
Charge Weight	45.0 gr.	2.916 gm	Load Density	247.3 gr./in. ³ 0.978 gm/cm ³
Heat of Explosion, Potential	237.2 J/gr.	3660 J/gm	Energy Density of Charge	58633 J/in. ³ 3578 J/cm ³
Propellant Solid Density	409.68 gr./in. ³	1.62 gm/cm ³	Used Ratio of Specific Heats cp/cv	1.242
Burning Rate Factor Ba	0.56 1/s		Weighting Factor	0.5
Burning Function Limit Z1	0.45		Prog.-/ Degressivity Factor a0	0.74
Factor b	1.557		Bulk Density	250.4 gr./in. ³ 0.990 gm/cm ³

Calculated and Estimated Data:

Bullet Shank Seating Depth	0.534 in.	13.56 mm	Capacity Displaced by Seated Bullet	0.0398 in. ³ 0.653 cm ³
Useable Case Capacity	0.1821 in. ³	2.983 cm ³	Bullet Travel at Muzzle Exit	22.52 in. 572.0 mm
Loading Ratio("Density") / Filling	98.7 %		Charge Fraction Burnt at Shot Start	1.15 %

Predicted Data:

Maximum Chamber Pressure	46507 psi.	3207 bar	Bullet Travel at Pmax	1.24 in. 31.4 mm
at Muzzle Exit:				
Bullet Velocity	2821 fps.	860.0 m/s	Pressure at Muzzle	6627 psi. 457 bar
Bullet Energy	2298 ft.lbs.	3116 Joule	Bullet Barrel Time	1.138 ms
Propellant Burnt	93.0 %		Ballistic Efficiency	29.2 %

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.

