

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:8-Apr-2015	Time:22:55:31	File: xpert 6.5mm wssm 98gr.dat	
Cartridge / Caliber	6.5 x WSSM	Bullet	.264, 98, XPERT	
Maximum Average Pressure, allowed	64542 psi.	4450 bar (Wildcat)	with flatbase	
Groove Caliber	0.264 in.	6.71 mm	Bullet Weight	98.0 gr. 6.35 gm
Case Capacity, overflow	56.0 gr. H2O	3.636 cm ³	Bullet Length	1.240 in. 31.5 mm
Case Length	1.660 in.	42.16 mm	Bullet Seating Depth	0.538 in. 13.66 mm
Cartridge O.A. Length	2.362 in.	60.0 mm	Barrel/Tube Length	24.0 in. 609.6 mm
Shot Start / Init Pressure	3625 psi.	249.94 bar	Cross Section Area of Bore	0.05362 in. ² 0.3459 cm ²
Propellant type	Somchem S355			
Charge Weight	41.5 gr.	2.689 gm	Load Density	215.7 gr./in. ³ 0.853 gm/cm ³
Heat of Explosion, Potential	253.4 J/gr.	3910 J/gm	Energy Density of Charge	54651 J/in. ³ 3335 J/cm ³
Propellant Solid Density	404.63 gr./in. ³	1.6 gm/cm ³	Used Ratio of Specific Heats cp/cv	1.2291
Burning Rate Factor Ba	0.5 1/s		Weighting Factor	0.5
Burning Function Limit Z1	0.39		Prog.-/ Degressivity Factor a0	2.36
Factor b	1.774		Bulk Density	227.6 gr./in. ³ 0.900 gm/cm ³

Calculated and Estimated Data:

Bullet Shank Seating Depth	0.538 in.	13.66 mm	Capacity Displaced by Seated Bullet	0.0295 in. ³ 0.483 cm ³
Useable Case Capacity	0.1924 in. ³	3.153 cm ³	Bullet Travel at Muzzle Exit	22.88 in. 581.1 mm
Loading Ratio("Density") / Filling	94.8 %		Charge Fraction Burnt at Shot Start	1.53 %

Predicted Data:

Maximum Chamber Pressure	48368 psi.	3335 bar	Bullet Travel at Pmax	2.08 in. 52.9 mm
at Muzzle Exit:				
Bullet Velocity	3065 fps.	934.3 m/s	Pressure at Muzzle	8912 psi. 614 bar
Bullet Energy	2044 ft.lbs.	2772 Joule	Bullet Barrel Time	1.171 ms
Propellant Burnt	98.6 %		Ballistic Efficiency	26.4 %

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.

