

**TrailBoss**

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.3.9.14 #54763, © Copyright 1987-2013 - H.Broemel, Babenhausen, Germany

<b>User Data:</b>	<b>Date:22-mai-2023</b>	<b>Time:19:37:29</b>	<b>File: 5744 20gr.dat</b>	
<b>Cartridge / Caliber</b>	<b>.577 Sld. Snider</b>	<b>Bullet</b>	<b>.58, 505, LYM LFN MINIE 575</b>	
Maximum Average Pressure, allowed	21756 psi.	1500 bar (Piezo CIP)	with flatbase	
Groove Caliber	0,574 in.	14,58 mm	Bullet Weight	505,0 gr. 32,72 gm
Case Capacity, overflow	114,0 gr. H2O	7,402 cm <sup>3</sup>	Bullet Length	1,080 in. 27,43 mm
Case Length	2,000 in.	50,8 mm	Bullet Seating Depth	0,610 in. 15,49 mm
Cartridge O.A. Length	2,470 in.	62,74 mm	Barrel/Tube Length	30,0 in. 762,0 mm
Shot Start / Init Pressure	1160 psi.	80,0 bar	Cross Section Area of Bore	0,25933 in. <sup>2</sup> 1,6731 cm <sup>2</sup>
<b>Propellant type</b>	<b>IMR TrailBoss</b>			
Charge Weight	21,5 gr.	1,393 gm	Load Density	73,3 gr./in. <sup>3</sup> 0,290 gm/cm <sup>3</sup>
Heat of Explosion, Potential	200,2 J/gr.	3090 J/gm	Energy Density of Charge	14666 J/in. <sup>3</sup> 0895 J/cm <sup>3</sup>
Propellant Solid Density	376,81 gr./in. <sup>3</sup>	1,49 gm/cm <sup>3</sup>	Used Ratio of Specific Heats cp/cv	1,231
Burning Rate Factor Ba	3,463 1/s		Weighting Factor	0,7
Burning Function Limit Z1	0,405		Prog.-/ Degressivity Factor a0	2,834
Factor b	1,9		Bulk Density	78,4 gr./in. <sup>3</sup> 0,310 gm/cm <sup>3</sup>

**Calculated and Estimated Data:**

Bullet Shank Seating Depth	0,61 in.	15,49 mm	Capacity Displaced by Seated Bullet	0,1581 in. <sup>3</sup> 2,591 cm <sup>3</sup>
Useable Case Capacity	0,2936 in. <sup>3</sup>	4,811 cm <sup>3</sup>	Bullet Travel at Muzzle Exit	28,61 in. 726,69 mm
Loading Ratio("Density") / Filling	93.4 %		Charge Fraction Burnt at Shot Start	3,12 %

**Predicted Data:**

Maximum Chamber Pressure	21184 psi.	1461 bar	Bullet Travel at Pmax	0,44 in. 11,2 mm
<b>at Muzzle Exit:</b>				
Bullet Velocity	1207 fps.	368,0 m/s	Pressure at Muzzle	525 psi. 36 bar
Bullet Energy	1634 ft.lbs.	2216 Joule	Bullet Barrel Time	2,585 ms
Propellant Burnt	100,0 %		Ballistic Efficiency	51,5 %

WARNING: Near Maximum Average Pressure - unknown tolerances may cause dangerous pressures !  
 Real maximum (peak) of pressure is reached while bullet moves within barrel.  
 End of combustion reached before bullet's base passes muzzle.

