



## Understanding Pressure

*The pressure generated from an explosion happens within fractions of a second and can build to more than 150 pounds per square inch. The following table illustrates what pressure levels can do*

Pressure (psig)	Damage	Impact on People	Wind Velocity, mph
0.50 – 1.0	Glass windows usually shattered; occasional damage to window frames	Knock personnel down	
2.0 – 3.0	Un-reinforced concrete or cinder block walls shattered		70
3.0	Heavy machines (3,000 lbs) in industrial building suffer little damage. Steel frame building distorted and pulled away from foundation. (Typical strength of industrial equipment like dust collectors)		
4.0	Oil storage tanks rupture		
5.0	Wooden utilities poles (telephone, etc.) snapped. Tall hydraulic press (40,000 lbs) in building slightly damaged	Rupture ear drums	160
7.0	Loaded rail cars overturn. Un-reinforced brick walls fail		
10.0	Probable total destruction of buildings. Heavy (7,000 lb) machine tools moved and badly damaged		290
15		Damage lungs	
35		Threshold fatalities	
50		50% fatalities	940
65		99% fatalities	
100 – 150	Explosion pressure		

