

# PROPERTIES OF EXPLOSIVES

The physical properties of explosives vary with such things as the density of loading, the degree of confinement, the temperature, and the purity of the ingredients. So the numbers shown below are a little rubbery and must be taken with a pinch of salt. Most of them come from laboratory testing where everything is just right. What you get out in the field may vary wildly. If you can add anything to this table please let me know and I will add the info to it.

Explosive	Heat CAL/Gram	Gasses CC/Gram	Power	LEAD BLOCK	F of I	V of D	MP	IP
Amatol 60/40					115	6470	76/80	240
Amatol 80/20	910	900	125	120	111/120	5080/1.5		235
Ammonal					110	4100/	250	250
Ammonium Picrate						6850	265	318
Baratol 70/30					100	4100	76/80	240
Baratol 80/20					100	4600	76/80	285
CE	1020	845	123	120	70	7300/1.5	129.1	180
DDNP						6900	157	195
Dinitrophenol					120	6400	110/114	250
Guncotton dry	895	880	113	115	23	7300/1.15		187
Guncotton wet	705	930	94	111	120	5500/1.23		187
Gunpowder	725	255	26		90			250
HMX						8900	273	327
Lead Azide	385	230	13	37	15/25	4500/3.8		350
Lead Styphnate	450	325	21	39	15	4900/2.6		250
Mercury fulminate	420	235	14	39	10	4500/3.3		170
Nitroglycerine	1615	740	171	160	13	7750	13	188
PE						8200/1.58		
Pentolite 50/50	1070	845	129	120	72	7455/1.6	100	
PETN						8300	139	225
Picric Acid	895	780	100	100	100	7250/1.63	121.6	250
RDX	1355	855	166	167	50/60	8400/1.7	203.5	213
RDX/TNT	1075	900	139	128	100	7975/1.63	100	
Shellite 70/30	765	840	92	85	115	6800/1.62	83	250
TNT	935	790	106	95	115	6900/1.57	81.1	240
Torpex 2						6850/1.73		

## Notes

SG = Specific gravity (Water = 1)

MP = Melting point

IP = Ignition point expressed in degrees

V of D = Velocity of detonation expressed in metres per second

F of I = Figure of Insensitivity

HEAT = this figure is the quantity of heat given out when a gram of the explosive detonates. It is expressed as calories per gram. A calorie is the amount of heat required to raise one CC of pure water through one degree Celsius.

GASSES = This figure represents the volume of gasses given off when one gram of explosive is detonated. It is measured in CC per gram.