Granulation's of Potassium Nitrate Black Powders

Mill Grade	Retained Sieve	Max %	Through Sieve	Max %
A-1	4	3.0	8	5.0
A-2	4	3.0	12	5.0
Cannon	6	3.0	12	5.0
A-3	12	3.0	16	5.0
A-3a	12	3.0	20	5.0
Musket	14	3.0	25	5.0
FFG	16	3.0	30	5.0
A-4	16	3.0	40	5.0
Shell	16	3.0	50	5.0
FFFG	20	3.0	50	5.0
A-5, Fuze	40	3.0	100	5.0
FFFFG	45	3.0	140	5.0
A-6	100	5.0	140	15.0
A-7	100	3.0	140	50.0
Meal	100	5.0	200	50.0
Commercial Grade				
Sporting				
Whaling	32/64*	3	4	12
Life-Saving-Service	6	3	12	12
Cannon	6	3	12	12
Saluting	10	3	20	12
Fg	12	3	16	12
FFg	16	3	30	12
FFFg	20	3	50	12
FFFFg	40	3	100	12
"A"Blasting				
FA	20/64*	3	5	12
2FA	4	3	12	12
3FA	10	3	16	12
4FA	12	3	20	12
5FA	20	3	50	12
6FA	30	3	50	12
7FA	40	3	100	12
Meal D	40	3	--	--
Meal F	100	3	--	--
Meal XF	140	3	--	--

Granulation's of Sodium Nitrate Black Powders

Military Grade

JAN C	9/16 inch	0	3/8 inch	0
JAN B	4	3	16	5
JAN A	12	3	40	5

Commercial Grade "B" Blasting

CCC	40/64*	7.5	32/64*	7.5
CC	36/64	7.5	24/64	7.5
C	27/64	7.5	18/64	7.5
F	20/64	7.5	5	7.5
FF	4	7.5	8	7.5
FFF	6	7.5	16	7.5
FFFF	12	7.5	--	--
Meal BB	16	7.5	--	--
Meal BD	40	7.5	--	--

Properties of Spherical Powders

Mesh Size	Sieve Opening in Inches	Sieve Opening in Microns	Volume per Particle in Cubic Inches	Surface Area per Particle in Square Inch	Surface Area* per Pound in Square Inches
20	.0331	841	1.899x10^-5	3.442x10^-3	8.22 x10^4
25	.0278	707	1.125x10^-5	2.428x10^-3	9.789x10^4
30	.0234	595	6.709x10^-6	1.720x10^-3	1.163x10^5
35	.0197	500	4.003x10^-6	1.219x10^-3	1.382x10^5
40	.0165	420	2.352x10^-6	8.553x10^-4	1.649x10^5
45	.0139	354	1.406x10^-6	6.070x10^-4	1.958x10^5
50	.0117	297	8.386x10^-7	4.301x10^-4	2.326x10^5
60	.0098	250	4.928x10^-7	3.017x10^-4	2.777x10^5
70	.0083	210	2.994x10^-7	2.164x10^-4	3.279x10^5
80	.0070	177	1.796x10^-7	1.539x10^-4	3.888x10^5
100	.0059	149	1.075x10^-7	1.094x10^-4	4.613x10^5
120	.0049	125	6.160x10^-8	7.543x10^-5	5.552x10^5
140	.0041	105	3.609x10^-8	5.281x10^-5	6.636x10^5
170	.0035	88	2.245x10^-8	3.848x10^-5	7.774x10^5
200	.0029	74	1.277x10^-8	2.642x10^-5	9.507x10^5
230	.0025	63	8.181x10^-9	1.963x10^-5	1.089x10^6
270	.0021	53	4.849x10^-9	1.385x10^-5	1.296x10^6
325	.0017	44	2.572x10^-9	9.079x10^-6	1.601x10^6
400	.0015	37	1.767x10^-9	7.069x10^-6	1.814x10^6
625	.00079	20.7	2.556x10^-10	1.948x10^-6	3.456x10^6
1250	.00039	9.9	3.195x10^-11	4.869x10^-7	6.913x10^6

*An absolute density of 1 gram per cubic centimeter (0.58 ounce per inch) is assumed. For materials of other densities, divide the figures in this column by the appropriate density. In the case of aluminum, for example divide by 2.7.