



### SAE Shot and Grit Specifications (SAE J827 & J1993)

PROPERTIES	SHOT	GP	GB	GL	GH
<b>SIZE</b>	All material is screened to meet or exceed SAE J444.				
<b>CHEMISTRY</b> Carbon Sulfur Phosphorus	0.80 –1.20 Less than 0.05 Less than 0.05	0.80 –1.20 Less than 0.05 Less than 0.05	0.80 –1.20 Less than 0.05 Less than 0.05	0.80 –1.20 Less than 0.05 Less than 0.05	0.80 –1.20 Less than 0.05 Less than 0.05
<b>A.V. HARDNESS</b>	40–51 Rc	40–51 Rc	47–56 Rc	54–61 Rc	min 60 Rc
<b>HARDNESS DEVIATION*</b>	Maximum average deviation is ± 3.0 Rc				
<b>MICROSTRUCTURE</b>	Highly refined and homogeneous tempered martensite				Martensite Homogeneous
<b>MINIMUM DENSITY</b> (as determined by displacement of alcohol)	7.0g/cc	7.3g/cc	7.3g/cc	7.3g/cc	7.3g/cc

\* Hardness is tested with a Microhardness Tester with Knoop Indenter, 1000 gram load or equivalent.

### W Abrasives steel abrasives sizes and general applications

(Based on results obtained with a 19½" dia wa at 2250 R.P.M.)

W ABRASIVES STEEL SHOT	APPROX SIZE OF ABRASIVE	"ARC HEIGHT" EXPECTED IN PEENING APPLICATION	SHOT FINISH PRODUCED	GENERAL APPLICATIONS	CORRESPONDING SAE GRIT SIZE	GRIT FINISH PRODUCED
(none) (none)	.002" .004"			Blasting of small ferrous & non-ferrous work & machined parts. Removal of very light scale.	* G-120	Very light etch-Matte or satin finish
• S-70 • S-110 • S-170	.007" .011" .017"	.004 to .007 A .007 to .011 A .012 to .015 A	Fine, smooth shot finish.  Excellent coverage.	Blasting of relatively small ferrous and non-ferrous castings. Removal of light scale from forgings & heat treated parts. Blasting of machined parts. Removal of mill scale, rust and other deposits.	G-80 G-50 G-40	Medium etch
• S-230 • S-280 • S-330	.023" .028" .033"	.016 to .019 A .020 to .024 A .024 to .028 A	Medium, light shot finish. Good coverage.	Blasting of grey iron, malleable iron, light steel castings, medium forgings, heat treated parts & heavy mill scale, - rust & other deposits.	G-25	Sharp etch
• S-390 • S-460 • S-550	.039" .046" .055"	.007 to .011 C .012 to .016 C	Average to heavy shot finish. Average coverage.	Blasting of steel, heavy malleable iron and grey iron castings. Removal of scale from large billets, slabs - rust & other deposits.	G-18 G-16 G-14	Deep etch rough
• S-660 • S-780	.066" .078"		Rough coverage. Adequate for most applications.	Heavy steel castings. Removal of tough heavy scale.	* G-12	Very rough

The above chart lists the abrasive sizes most commonly used in blasting operations - the encircled dots to the left of the SAE number represent the approximate shape and size of actual abrasive pellets. The round W Abrasives Steel Shot is heat treated and drawn to a hardness of 40 to 51 Rockwell "C". W Abrasives angular products are available in various degrees of hardness.

\* Not often used



**S H O T**

product	7	8	10	12	14	16	18	20	25	30	35	40	45	50	80	120	200
S780	AP		85% min	97% min													
S660		AP		85% min	97% min												
S550			AP		85% min	97% min											
S460			AP	5% max		85% min	96% min										
S390				AP	5% max		85% min	96% min									
S330					AP	5% max		85% min	96% min								
S280						AP	5% max		85% min	96% min							
S230							AP	10% max		85% min	97% min						
S170								AP	10% max			85% min	97% min				
S110										AP	10% max			80% min	90% min		
S70												AP	10% max		80% min	90% min	
Screen Number	7	8	10	12	14	16	18	20	25	30	35	40	45	50	80	120	200
Screen Size (mm)	2.80	2.36	2.00	1.70	1.40	1.18	1.00	0.85	0.71	0.60	0.50	0.425	0.355	0.30	0.180	0.125	0.075
Screen Size (inches)	0.111	0.0937	0.0787	0.0661	0.0555	0.0469	0.0394	0.0331	0.0278	0.0234	0.0197	0.0165	0.0139	0.0117	0.007	0.0049	0.0029

3.

**G R I T**

product	7	8	10	12	14	16	18	20	25	30	35	40	45	50	80	120	200
G.12		AP		80% min	90% min												
G.14			AP		80% min	90% min											
G.16				AP		75% min	85% min										
G.18					AP		75% min	85% min									
G.25						AP		70% min		80% min							
G.40							AP			70% min		80% min					
G.50									AP			65% min	75% min				
G.80											AP		65% min	75% min			
G.120													AP		60% min	70% min	
Screen Number	7	8	10	12	14	16	18	20	25	30	35	40	45	50	80	120	200
Screen Size (mm)	2.80	2.36	2.00	1.70	1.40	1.18	1.00	0.85	0.71	0.60	0.50	0.425	0.355	0.30	0.180	0.125	0.075
Screen Size (inches)	0.111	0.0937	0.0787	0.0661	0.0555	0.0469	0.0394	0.0331	0.0278	0.0234	0.0197	0.0165	0.0139	0.0117	0.007	0.0049	0.0029

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