



W Abrasives®



USA PLANT/OFFICE

1 Abrasive Avenue
Bedford, VA 24523 USA
800-207-4691

CANADA PLANT/OFFICE

650 Rusholme Road
Welland, Ontario L3B 5R4 Canada
800-207-4691

www.wabrasives.com



W ABRASIVES

W Abrasives is a supplier of cast steel abrasive with a quality management team and a participating work force that is totally dedicated toward improvement of product and service, with a philosophy that includes Statistical Process Control (SPC). We're an action company that reflects a commitment to use of statistical methods to verify manufacturing processes and to guide employee involvement in this dedication.



**Steel Abrasive
SAE Shot and Grit Size
Specifications**



W Abrasives®

SPECIFICATION OF ABRASIVES

W Abrasives	Steel Shot	Angular Shot GP	Steel Grit GB	Steel Grit GL	Steel Grit GH
Shape when new	Round	Angular	Angular	Angular	Angular
Shape in the operating mix	Round		Angular		
Sieve analysis	According to standard SAE J 444				
Chemical analysis	According to standard SAE J827 shot / J1993 grit				
Micro hardness: • Tukon • Diamond Pyramid Point • 1000g load	normal 40-51 HR C other hardness	40-51 HR C	47-56 HR C	54-61 HR C	min 60 HR C
Vickers	392-528 HV other hardness	392-528 HV	544-613 HV	613-697 HV	> 697 HV
Standard deviation	On 10 measurements taken halfway across the particle radius. Arithmetic mean of absolute values of deviations: < 3Rc ± 3Rc ± 3Rc ± 3Rc ± 3Rc ± 3Rc or or or or or ± 40 HV ± 40 HV ± 50 HV ± 60 HV ± 80HV				
Microstructure	Well controlled manufacturing gives the shot a martensitic structure that blends the iron and carbon atoms in the finest and most ideal way possible. This structure produces a homogeneity of hardness and resistance throughout the shot. Without this structure the shot would not have the resistance necessary for the applications in which it is used.				
Minimum density measured by alcohol displacement	> 7.0g/cm ₃		> 7.3g/cm ₃		



W Abrasives®



steel SHOT

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

W Abrasives, Steel Shot is a spherical product of hypereutectoid steel in the fully heat treated condition. It has a uniform structure of finely tempered martensite which provides optimum resilience and resistance to fatigue.

This makes steel shot ideally suited for both cleaning and peening applications.



steel GRIT

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

Cast steel angular grit is produced by crushing specially heat treated shot pellets. Its behavior characteristics in service are very much dependent upon the hardness selection of GP, GB, GL or GR grit.

GP ANGULAR SHOT- Angular when new, this grit rapidly rounds off in use and is particularly suited to general cleaning applications.

GB STEEL GRIT - More aggressive than GP, with many characteristics similar to GL.

GL STEEL GRIT - Although harder and more aggressive than GB Steel Grit, GL also loses its sharp edges during abrasive blasting and is particularly suited to descaling and surface preparation applications.

GH STEEL GRIT - Having maximum hardness, GH always remains angular in its operating mix. This steel has a fast, effective, etching action, making it ideal for deep descaling and etched surface requirements. For use mainly with compressed air equipment.

GR STEEL GRIT- Like GH but stress relieved to provide both effective stone cutting rates and durability.

product	7	8	10	12	14	16	18	20	25	30	35	40	45	50	80	120	200
GP.12		AP		80% min	90% min												
GP.14			AP		80% min	90% min											
GP.16				AP		75% min	85% min										
GP.18					AP		75% min	85% min									
GP.25						AP		70% min			80% min						
GP.40							AP				70% min		80% min				
GP.50									AP				65% min	75% min			
GP.80												AP		65% min	75% min		
GP.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

W Abrasives technical studies have shown that at an average of 44 HRC hardness, GP Angular-shot™ provides the optimum performance in many foundry and other cleaning applications. These studies show that the performance characteristics of GP Angular-shot™ are similar to steel shot but also have the extra initial aggressiveness of an angular material. Due to the rapid rounding of GP Angular-shot™ there is no increase in abrasive consumption or machine wear.

New product would look similar to steel grit.

Samples shown are similar to a typical operating mix.