

Technical Data Sheet

Material: Steel Grit SAE J444 & WAE

Product Name: Steel Grit; **Identifier:** GH/GL/GP/GS (16,18,25,40,50,80)

GH — Steel Grit, Hard; **GL** — Steel Grit, Long life; **GP** — Steel Grit, Peened edges; **GS** — Steel Grit, Special hardness

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1. Product Description

Steel Grit is a high-carbon cast steel abrasive consisting of angular particles produced by crushing heat-treated steel shot. Due to its angular structure, steel grit обеспечивает effective surface cleaning and controlled surface roughness during blasting processes.

The abrasive is intended for use in shot blasting and grit blasting applications for the removal of scale, rust, paint, and other surface contaminants, as well as for surface preparation prior to coating, painting, or metallization.

Steel grit is manufactured in accordance with SAE particle size classifications and complies with the requirements of SAE J827 and ISO 11124-3 standards for high-carbon cast steel grit, ensuring consistent particle shape, hardness, and performance.

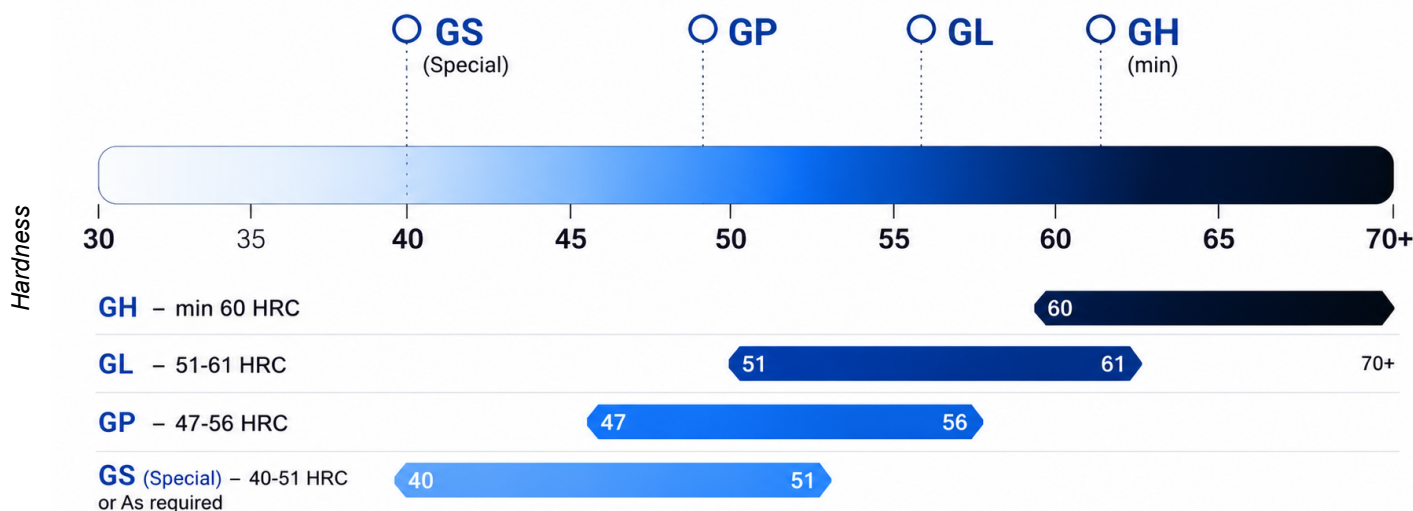
2. Chemical Composition (Typical values, %)

Fe, %	C, %	Mn, %	Si, %	S, %	P, %
96,5-98,0	0,8-1,2	0,6-1,2	0,5-1,0	≤ 0.05	≤ 0.05

**According to
standard
SAE J827**

All chemical elements in chilled Steel Grit are in an alloyed form, not in a free form.

3. PHYSICAL AND CHEMICAL PROPERTIES



Type	Hardness	Shape in use	MICROSTRUCTURE	Colour
GH (Hard)	min 700 HV; 60 HRC	sharp edges	Martensite with bainite	grey metallic
GL (Long life)	510-700 HV; 51-61 HRC	rounded edges	Fine and homogeneous martensite	grey with a bluish hue
GP (Peened edges)	460-630 HV; 47-56 HRC	potatoed	Fine and homogeneous martensite	grey with a bluish hue
GS (Special)	390-530 HV; 40-51 HRC or As required	potatoed	Fine and homogeneous martensite	grey with a bluish hue

Melting Point	-	approx. 1 535 °C	Conductivity	-	< 30 µS/cm
Density	-	min 7.2 g/cm3	pH	-	Not applicable
Upper/Lower Flammability or Explosive Limits	-	Not	Flash Point	-	Not applicable
Odour	-	None	Solubility	-	Insoluble in water
Odour Threshold	-	Not applicable	Explosive Properties	-	Non-explosive

▽ 4. Size characteristics

Grain size specifications in accordance (with SAE J444)

Type	Sieve size (mm) / Accumulated mass values (%)																			
	4,75	4,00	3,35	2,80	2,36	2,00	1,70	1,40	1,18	1,00	0,85	0,71	0,60	0,50	0,43	0,36	0,30	0,18	0,12	0,07
G12					0		min % 80	min % 90												
G14						0		min % 80	min % 90											
G16							0		min % 75	min % 85										
G18								0	min % 75		min % 85									
G25									0		min % 70				min % 80					
G40										0					min % 70		min % 80			
G50												0					min % 65	min % 75		
G80															0			min % 65	min % 75	

SAE J444

Grain size specifications in accordance (with WAE)

Type	Sieve size (mm) / Accumulated mass values (%)																			
	4,75	4,00	3,35	2,80	2,36	2,00	1,70	1,40	1,18	1,00	0,85	0,71	0,60	0,50	0,43	0,36	0,30	0,18	0,12	0,07
W G12				0	max % 20		min % 85	min % 97												
W G14					0	max % 10		min % 80	min % 90											
W G16						0	max % 10		min % 80	min % 90										
W G18							0	max % 30		min % 85	min % 97									
W G25								0	max % 40			min % 85	min % 97							
W G40									0	max % 20				min % 90	min % 96					
W G50											0	max % 10				min % 80	min % 90			
W G80														0	max % 20			min % 75	min % 90	

WAE

Explanation:

- The number in the table indicates the maximum or minimum allowable percentage for a given abrasive that passes through the specified sieve opening.
- Symbols such as ">90" or ">85" indicate that more than 90% or 85% of the abrasive should be smaller than the sieve opening.

Type	Nominal Particle Size	Surface Profile Produced	Typical Applications
G120	0.125 mm (0.005 in)	Very fine surface profile (matte/satin finish)	- Removal of light oxidation and thin scale - Cleaning of small ferrous and non-ferrous components - Precision blasting of machined parts
G-80 G-50 G-40	0.30–0.60 mm (0.012–0.025 in)	Medium surface profile	- Cleaning of small steel and non-ferrous castings - Removal of light mill scale from forgings and heat-treated parts - Rust and coating removal - Surface preparation for powder coating and painting - Air-blast applications
G25	0.71 mm (0.028 in)	Coarse surface profile	- Blasting of grey iron, ductile iron, and light steel castings - Surface preparation for pipe coating - Cleaning of structural steel - Wheel-blast applications
G-18 G-16 G-14	1.00–1.70 mm (0.040–0.067 in)	Deep, rough surface profile	- Cleaning of heavy steel, ductile iron, and grey iron castings - Removal of heavy mill scale and thick rust from billets, slabs, and fabricated steel - Preparation of heavy structural steel - Pipe coating applications - Wheel-blast systems
G12	1.85 mm (0.073 in)	Very deep, aggressive surface profile	- Heavy steel castings and large fabrications - Removal of extremely heavy scale and refractory residues - Bottom-pour ladle sealing applications - Heavy-duty wheel-blast operations

▽ 5. Standards & Compliance

This product fully complies with:

SAE J827 – High-carbon cast-steel shot and grit

ISO 11124-3 – Metallic abrasives, steel grit

SAE J444 – Particle size designations

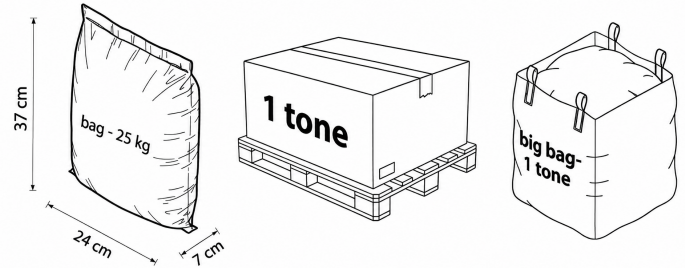
ISO 11125 series – Testing methods

▽ 6. Packaging

- 25 kg polyethylene bags, packed in cardboard on a 1000 kg pallet or big bags on a 1000 kg pallet.

- Palletized 1-ton bulk bag (Big Bag)

- Custom packaging available upon request



▽ 7. Storage & Handling

Avoid inhalation of dust (use PPE, ventilation)

Follow local occupational safety standards

MSDS (Material Safety Data Sheet) available upon request

▽ 8. Applications

Typical applications include:

- Surface preparation prior to coating, painting, or metallization
- Removal of scale, rust, paint, and casting residues
- Cleaning of castings, forgings, and welded structures
- Roughening of surfaces for improved coating adhesion
- Shot blasting of steel plates, profiles, and structural components
- Use in wheel blasting and air blasting systems
- Foundry applications — cleaning and deburring of cast parts

Industries served:

- Foundry and steel fabrication
- Shipbuilding and offshore structures
- Automotive and railway industries
- Heavy machinery manufacturing
- Construction and bridge maintenance
- Energy, pipelines, and metal processing sectors

NOTE:

The results of chemical analysis and indicators of physical and mechanical properties are listed in the account books of the plant.

No materials and raw materials of Russian production were used in the production of shot.



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January 22, 2026