

META[®] SHOT

BLAST CLEANING



PREMIUM ABRASIVES

Redefining Surfaces



ABOUT US

The company entered in shot blasting field in 1993, was doing outsource work for other companies for shot blasting of various items. With a broad vision in the blasting industry later in 2004, **Shot Blasting Machine Spares** Manufacturing was started. In 2010, **Steel Abrasives** Manufacturing facility was planned to provide excellent media for shot blasting for the growing industry. In 2018, exploring the market capabilities we introduced **Casted Stainless-Steel Shots** for non-ferrous castings. Now we possess one of the best manufacturing infrastructures completely automated with latest technology for production of 12000 MT per annum.

We are serving the surface preparation and blasting industry with more than two decades. With the introduction of METASHOT we have done technical up gradation of our manufacturing capabilities. In the context of our country new initiative – "MAKE IN INDIA", we initiated to launch the METASHOT- a premium abrasives with automated and fully controlled production line.

METASHOT is a symbol of premium quality abrasives in the market. Awareness in respect to quality, consumption, timing and surface finishing is growing with consumers. With METASHOT will fulfill the quality and sustainable abrasives requirement of the various market.

Quality Standard

We are an ISO 9001:2015 certified manufacturer of premium abrasives. With state-of-the-art infrastructure we manufacture premium quality steel shots and steel grits. Our product confirms to SAE J444, SAE J827, SAE J1993 and IS 4606 standards.



Testing Facilities



Spectrometer



Ervin Life Cycle Testing



Micro Hardness Testing

We adore our relationship with our clients for the trust and reliability on us. Our energetic young team is continuously working to provide best quality and competitive product with technical expertise to achieve customer satisfaction.

We feel proud that we are one of the largest manufacturers of Abrasives in India with best quality steel shots and steel grits.

Vision

To become a leading abrasives company by delivering cost effective and sustainable quality products for surface preparations.

Mission

We will be the preferred partner in delivering premium abrasives with focus on:

- Customer Centric Organization
- Ensuring cost effectiveness
- Competent and committed people developing.

CORE VALUE

- **RELIABLE** Delivering consistently good quality and high-performance products.
- **INNOVATION** Quickly test and validate new ideas into action.
- **ACCOUNTABILITY** Owning the decisions made and their outcomes.
- **HONESTY** Being upfront and forthcoming with information and insights.
- **TEAMWORK** Working cohesively and collaboratively.

Steel Shot refers to spherical grain made of molten steel through an atomization (granulation) process, available in different sizes and hardness.

Steel Shot is a general-purpose manufactured abrasive used to remove mill scale and moulding sand. Its round shape cleans by hammering the surface, leaving a uniform surface profile. Steel Shot is most commonly used in wheel blast equipment and closed-circuit blast systems for steel plate blasting, cleaning castings and forgings, and ship and railcar manufacturing and maintenance. With our quality we serve various industries like Automotive, Metallurgy, Aerospace, Petroleum Industries, etc.



Steel Shot complies with SAE specifications J444 and J827 as well as IS 4606 of 1983.

Chemical Composition :

Carbon	0.80 – 1.20 %
Silicon	> 0.40 %
Manganese	0.35 – 1.20 %
Phosphorus	< 0.050%
Sulphur	< 0.050%

General Appearance :

Steel Shot shall be as nearly spherical.

Density :

Not less than 7.0 g/cc

Hardness :

SAE standard – 40 – 50 Hrc
(Rockwell Hardness)

IS standard – 400 – 500 HV
(Vickers Hardness)

Custom hardness available on request.

Micro structure :

The micro structure of steel shot shall be uniform martensite, tempered to a degree consistent with the hardness range with fine well distributed carbides if any.

Size Distribution as per SAE specification

Mesh No.	Sieve (mm.)	SAE Shot Number									
		S-780	S-660	S-550	S-460	S-390	S-330	S-280	S-230	S-170	S-110
7	2.800	All pass									
8	2.360		All pass								
10	2.000	85% min.		All pass	All pass						
12	1.700	97% min.	85% min.		5% max.	All pass					
14	1.400		97% min.	85% min.		5% max.	All pass				
16	1.180			97% min.	85% min.		5% max.	All pass			
18	1.000				97% min.	85% min.		5% max.	All pass		
20	0.850					96% min.	85% min.		10% max.	All pass	
25	0.710						96% min.	85% min.		10% max.	
30	0.600							96% min.	85% min.		All pass
35	0.500								97% min.		10% max.
40	0.425									85% min.	
45	0.355									97% min.	
50	0.300										80% min.
80	0.180										90% min.

APPLICATION :

Shot Blasting of Cast Steel, Sand Removal, Surface Preparation, Scale Removal, Etc.

SAE	Steel Shot Application
S - 110 S - 170 S - 230	Shot Peening Stainless steel plate, thin steel plate and non-ferrous metals before painting process to increase elasticity and toughness.
S - 280	Blasting small cast iron, cast, part, heat treatment piece, cast aluminum, cast steel plate and cast copper alloy before gold- plating process to increase elasticity and toughness.
S - 330 S - 390	Knock-out, descaling, peening and shaping of small-to-medium cast iron, ductile iron, cast parts, heat treatment piece, steel plate and pipe.
S - 460 S - 550	Knock-out, descaling, peening and shaping of medium-to- large cast iron, cast steel, forged piece, heat treatment piece, steel plate and pipe.
S - 660 S - 780	Knock-out or descaling large cast iron, cast steel, iron pipe, forged piece and heat treatment piece.

Steel grit characterizes grain with a predominantly angular shape. These grains are obtained by crushing steel shot, therefore they exhibit sharp edges and broken sections. Steel grits are subsequently tempered to different hardness to cater different applications .

Steel Grit is a general-purpose manufactured abrasive used to remove thick coatings, heavy rust, and mill scale. It's fully angular shape cleans by aggressively cutting away at the surface leaving a uniform surface profile. Steel Grit is most commonly used in abrasive blasting rooms and mobile steel grit recycling systems and is frequently used for bridge, wind tower, and ship and railcar manufacturing and maintenance. .



STEEL GRIT complies to SAE specification J1993 and J444 as well as IS 4606 of 1983.

Chemical Composition :

Carbon	0.80 – 1.20 %
Silicon	> 0.40 %
Manganese	0.35 – 1.20 %
Phosphorus	< 0.050%
Sulphur	< 0.050%

General Appearance :

Steel Grit shall be as nearly angular.

Density :

Not less than 7.4 g/cc

Hardness

SAE Standard	IS Standard
GH - > 60 HRc	GH - 700 - 800 HV
GL - 50 - 60 HRc	GL - 550 - 715 HV
GP - 40 - 51 HRc	GP - 400 - 500 HV

Custom hardness available on request.

Micro Structure :

The micro structure of steel grit shall be uniform martensite, tempered to a degree consistent with the hardness range with fine well distributed carbides if any.

Size Distribution as per SAE specification

Mesh No.	Sieve (mm.)	SAE Grit Number									
		G - 10	G - 12	G - 14	G - 16	G - 18	G - 25	G - 40	G - 50	G - 80	G - 120
7	2.800	All pass									
8	2.360		All pass								
10	2.000	80% min.		All pass							
12	1.700	90% min.	80% min.		All pass						
14	1.400		90% min.	80% min.		All pass					
16	1.180			90% min.	75% min.		All pass				
18	1.000				95% min.	75% min.		All pass			
20	0.850										
25	0.710					85% min.	70% min.		All pass		
30	0.600										
35	0.500										
40	0.425						80% min.	70% min.		All pass	
45	0.355										
50	0.300							80% min.	65% min.		All pass
80	0.180								75% min.	65% min.	
120	0.125									75% min.	60% min.
200	0.075										70% min.

APPLICATION :

Pipe Coating, Stone Cutting, Air Blasting, Surface Preparation, Etc.

SAE	Steel Grit Application
G-12 - 2.0mm G-14 - 1.7mm G-16 - 1.4mm	- Blasting/Descaling medium-to-large cast steel, cast iron, forged pieces, steel plate and rubber adhered work piece.
G-18 - 1.2mm G-25 - 1.0mm G-40 - 0.7mm	- Cutting/grinding stone; Blasting rubber adhered work piece; - Descaling steel plate, container, ship hull before painting; - Cleaning small-to-medium cast steel, cast iron, forged pieces, etc.
G-50 - 0.4mm G-80 - 0.3mm G-120 - 0.2mm	- Blasting/descaling steel wire, sparker, steel pipe before painting process; - Cleaning precision casting (eg. golf blocks)

QUALITY WITHOUT COMPROMISE

Contact Nice and New Abrasives Industries to have smother and long lasting blasting experience with premium quality steel shots and steel grits.

Group of Companies

Abrasives Manufacturing :

Plant 1 :



Nice & New
Abrasives Industries

Plant 2 :



Narmada
Steel

Shot Blasting Machine Spares Manufacturing

Plant 3 :



Address : Survey No. 89/1, B/h. Tirth Agro Pvt. Ltd.
Village Bhunava, Tal. Gondal, Dist. Rajkot- 360 311 Guj. (India)
M. 99090 26335, 99740 07533 | **E.** info@nnabrasives.com

Metashot is the registered trademark of Nice and New Abrasives Industries. ® ©