



Your Blasting Abrasive Matters More than you Think

Including a Quick Comparison Guide to
Common Industrial Blasting Abrasives.

gmagnet.com



CONSUMPTION



PRODUCTIVITY



CLEAN UP COST



Three critical areas that could make or break your business

Explore how the most common blasting abrasives compare on productivity, safety and cost.

Improving Productivity

Productivity is the key to profitability. Lower priced abrasives can be deceptively expensive.



PRODUCTIVITY

Higher productivity accelerates project completion.



CONSUMPTION

Use less abrasive per square foot.



CLEAN UP COST

Reduce labor, equipment and disposal costs.

Meeting Project Deadlines

Choosing the right abrasive can keep projects on schedule.



SURFACE QUALITY

A cleaner surface passes inspections.



DUST

Minimize dust and keep workers safer.



ABRASIVE SUPPLY

Unpredictable abrasive supplies can be costly.

Protecting Workers and Communities

Abrasive blasting is a dusty business that can put workers and community health at risk.



HAZARDS

Blasting can pose a serious risk to human health.



ENVIRONMENT

Reduce contamination of soil and water bodies.



RECYCLING

Choose an abrasive that can be used more than once.



A Quick Comparison of Common Industrial Blasting Abrasives

	GMA Garnet™	Waste Slag	Silica Sand	Metallic Abrasives	Aluminum Oxide	Crushed Glass
Productivity (ft²/hr)	Medium/high	Medium	Medium/high	Medium/high	High	Low
Consumption (lb/ft²)	2 to 4	5 to 8	8 to 12	0.5 to 1	2 to 4	8 to 12
Surface Quality	Minimal embedment Consistent profile No rework required	Medium to high level of embedment Possible rework required	Medium to high level of embedment	Steel grit: High level of embedment Steel shot: No embedment	High level of embedment	Medium to high level of embedment Possibility of chalky white residue
Dust	Low	High Possibility of exceeding respirable hazardous limits	High Possibility of exceeding respirable hazardous limits	Low on initial blast Possibilities of high dusting after recycling	Low	High
Heavy Metals and Hazards	Trace amounts (significantly below OSHA limits) Some products have silica	Arsenic Beryllium Cadmium Chromium Copper Lead Manganese Nickel Vanadium <small>*Heavy metal content will vary depending on the type of slag abrasives, i.e. Copper, Coal, Nickel.</small>	Silica	Trace amounts (significantly below OSHA limits)	Trace amounts (significantly below OSHA limits)	Trace amounts (significantly below OSHA limits)
Environmental Contamination Risk	Low	High	Low	Low	Low	Low
Disposal Cost	Low	Medium to high Possible extra costs for hazardous	High	Low	Low	High
Friability	Low	High	High	Low	Low	High
Toughness <i>Recovered abrasive (After One Blast)</i>	60% to 70%	12% to 62% (coal slag) 30% to 40% (copper slag) 38% to 43% (nickel slag)	As low as 10% and up to 25%	Up to 100%	Up to 70 to 80%	As low as 10% and up to 25%
Hardness <i>(Knoop Scale)</i>	1700	550-800 (coal slag) 950 (copper slag) 500-700 (nickel slag)	500	1500 - 3000	1800	600
Specific Gravity <i>(g/cm³)</i> <i>(Density Relative to Water)</i>	4.2	2.7 (coal slag) 3.4 (copper slag) 2.8 (nickel slag)	2.5	7.4	3.9	2.5
Bulk Density (lb/ft³)	140	56-85 (coal slag) 90-112 (copper slag) 85-105 (nickel slag)	70-100	230-260	120	80
Recycling	Can be recycled 4 to 5 times	Cannot be recycled	Cannot be recycled	Can be recycled 25 to 30 times	Can be recycled 4 to 5 times	Cannot be recycled
Supply	Secure supply Mined and produced domestically and internationally	Supply restricted to existing waste piles (U.S.) Produced domestically and internationally	Plentiful supply Mined and produced domestically and internationally	Plentiful supply Produced domestically and internationally	Supply disruptions Not produced domestically	Plentiful supply Produced domestically and internationally

Disclaimer: The data and information contained on this sheet are general representative ratings and should be used as a guide only



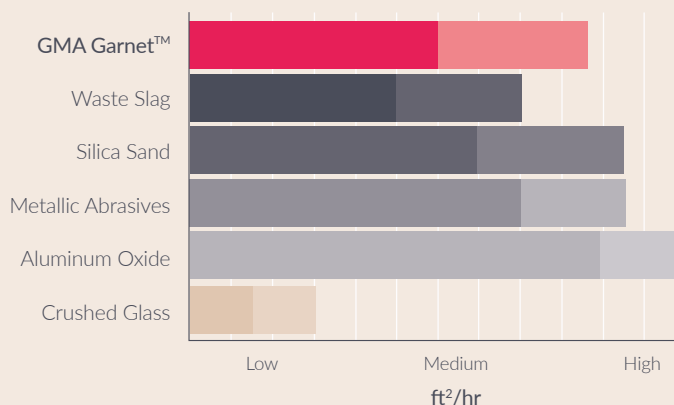
Higher Productivity, Higher Profit

Productivity is the key to profitability. Lower priced abrasives can be deceptively expensive when taking into account productivity, consumption and disposal costs.



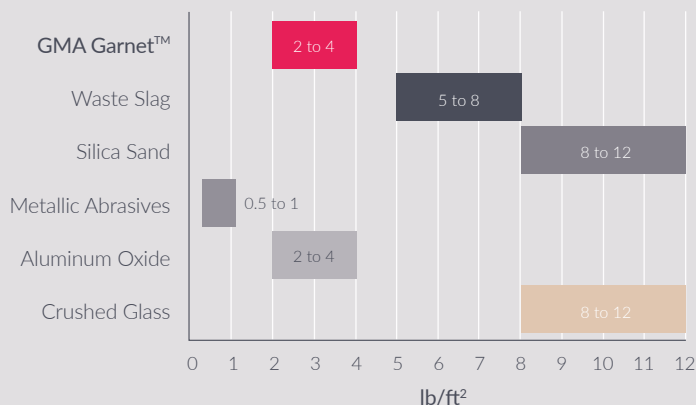
PRODUCTIVITY

Faster blast performance means higher productivity and accelerating project completion.



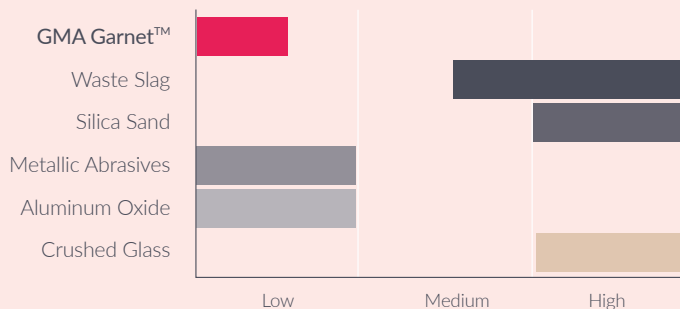
CONSUMPTION

Lower consumption results in less abrasive required per square foot. Calculate the abrasive cost per square foot, not per ton.



DISPOSAL COST

Using less abrasive means less to clean up; reducing labor, equipment and disposal costs.



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Meet Project Deadlines

Choosing the right abrasive can keep projects on schedule. Don't run the risk of inspection failures, poor visibility and inconsistent supplies causing delays and budget overrun.



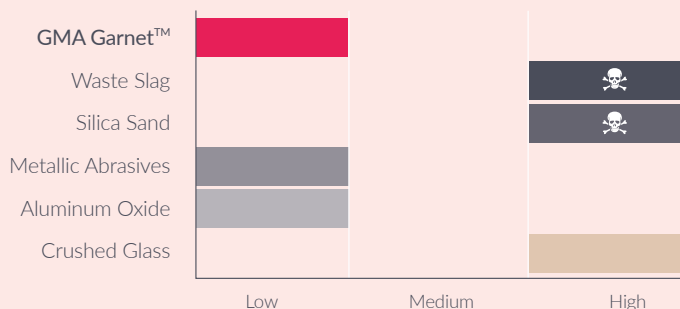
SURFACE QUALITY

A cleaner surface finish plays a crucial role passing inspections and minimizing rework.



DUST

Keeping dust to a minimum will keep workers safer by improving visibility and reducing exposure to toxic particles.

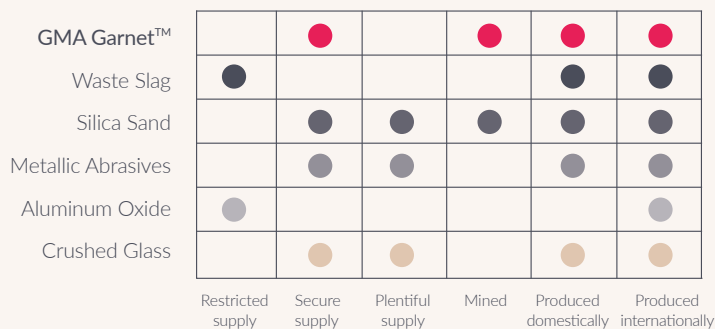


⚠️ Possibility of exceeding respirable and hazardous limits.



ABRASIVE SUPPLY

Unpredictable or inconsistent abrasive supplies can blow out project timelines and be costly.



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Protect Workers and Communities

Abrasive blasting is a dusty business that can contaminate the air, soil and water, putting workers and community health at risk.



HEAVY METALS AND HAZARDS

Blasting can pose a serious risk to human health by exceeding toxic respirable exposure limits.

GMA Garnet™	●	●									
Waste Slag*		●	●	●	●	●	●	●	●	●	●
Silica Sand		●									
Metallic Abrasives	●										
Aluminum Oxide	●										
Crushed Glass	●										
	Metals**	Silica ***	Arsenic	Beryllium	Cadmium	Chromium	Copper	Lead	Manganese	Nickel	Vanadium

*Heavy metal content will vary depending on the type of slag abrasives, i.e. Copper, Coal, Nickel

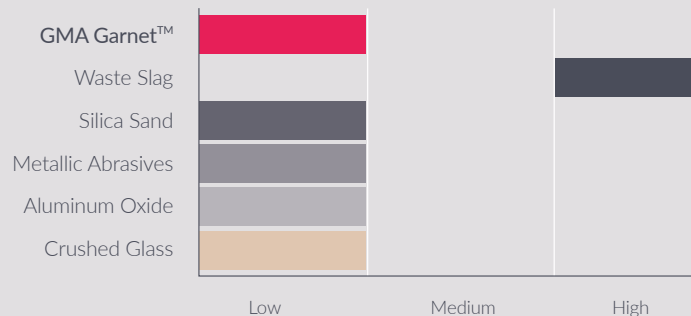
**All blast abrasives do contain some levels of metals. Garnet, metallic abrasives, and crushed glass have minuscule amounts of metals and significantly below OSHA limits. This is unlike other waste slag abrasives which may contain substantial amount of heavy metals well above EPA and OSHA limits.

***Naturally mined minerals contain (trace, small amount, miniscule) amounts of silica as well as some slags and other manufactured abrasives.



ENVIRONMENTAL CONTAMINATION

Reduce the risk of contaminating soil and water bodies, including water tables that supply drinking water.



RECYCLING

Choose an abrasive that can be used more than once. Recover costs, minimize waste and maximize resources.

	Cannot be recycled	Can be recycled 4 - 5 times	Can be recycled 25-30 times
GMA Garnet™		✓	
Waste Slag	✗		
Silica Sand	✗		
Metallic Abrasives			✓
Aluminum Oxide		✓	
Crushed Glass	✗		

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