



Your Blasting Abrasive Matters More than you Think

A quick (*and honest*) guide to comparing blast abrasives.

gmagarnet.com





Three critical areas that could make or break your business

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



Lower Total Costs

Productivity is the key to profitability. Lower cost abrasives can often result in unexpected expenses.



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 trace free silica.	Arsenic Beryllium Cadmium Chromium Copper Lead Manganese Nickel Vanadium <i>*Heavy metal content will vary depending on the type of slag abrasives, i.e. Copper, Coal, Nickel.</i>	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



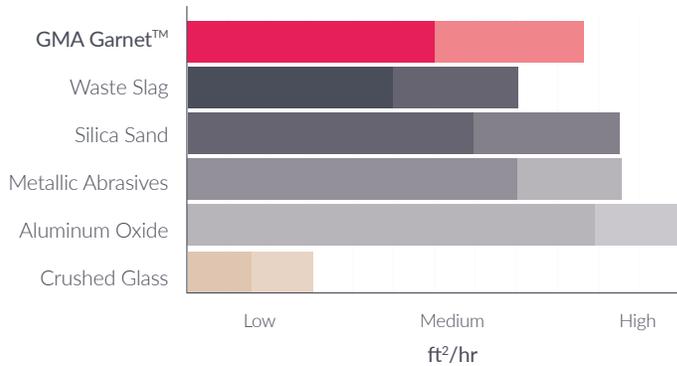
Lower total costs

Reducing cost goes beyond just price per tonne, it's about every facet of the project – mastering productivity, minimizing consumption, optimizing labor, and streamlining waste – to cut downtime and ensure projects are completed on time and on budget.



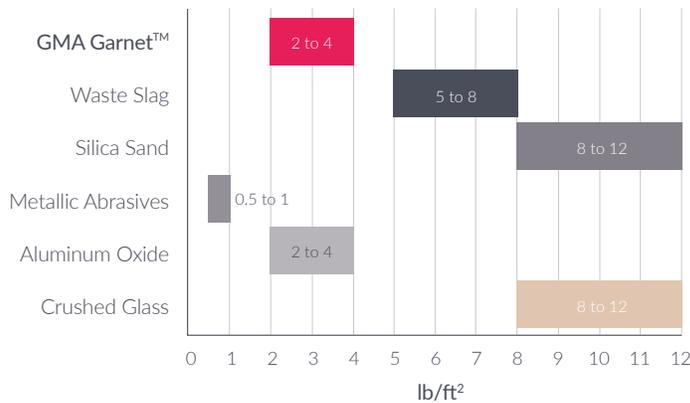
Productivity

Faster blast performance means higher productivity and accelerating project completion.



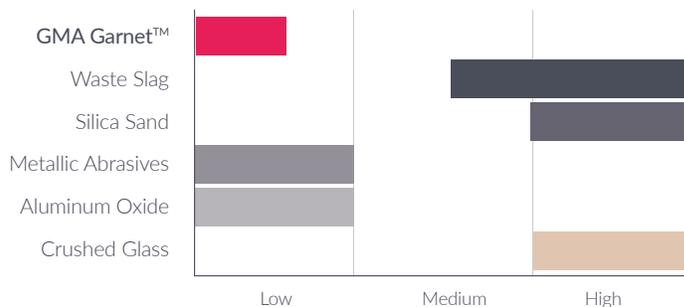
Consumption

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



Clean Up Cost

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



Blast cost calculator

Your abrasive is costing you more than just its price per tonne. Find out how much you can save with the right abrasive.

[CALCULATE MY COSTS](#)





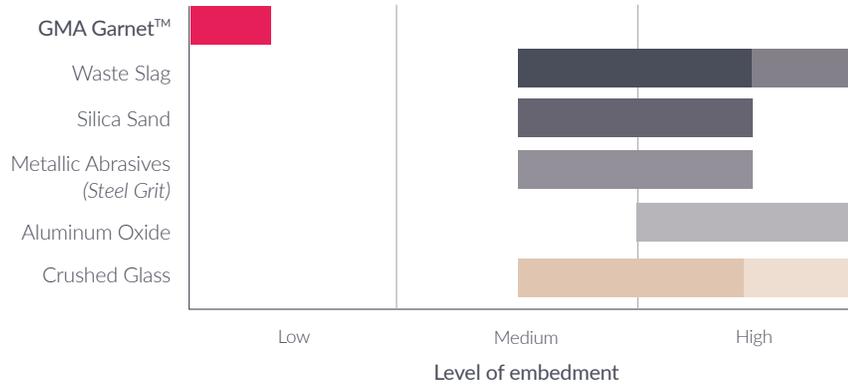
Meet Project Deadlines

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 blow out.



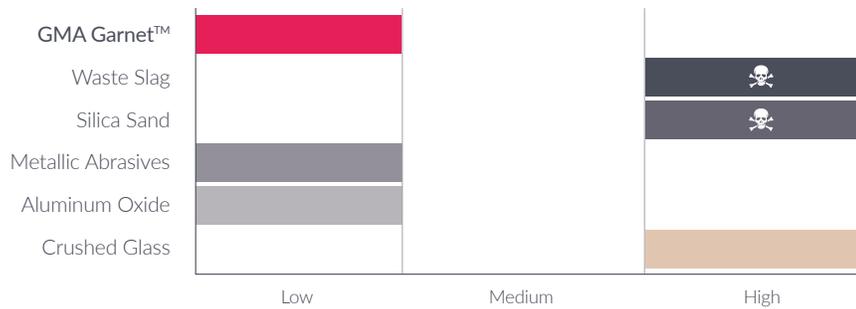
Surface Quality

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.

GMA Garnet™		●		●	●	●
Waste Slag	●				●	●
Silica Sand		●	●	●	●	●
Metallic Abrasives		●	●		●	●
Aluminum Oxide	●					
Crushed Glass		●	●		●	●
	Restricted supply	Secure supply	Plentiful supply	Mined	Produced domestically	Produced internationally



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.



Hazards

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

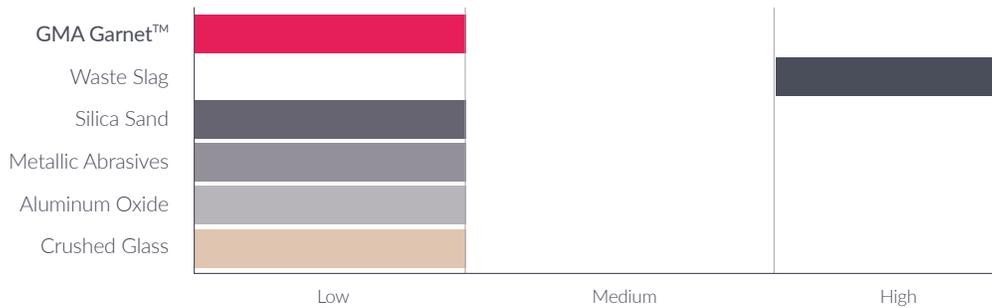
	Trace Metals**	Silica	Arsenic	Beryllium	Cadmium	Chromium	Copper	Lead	Manganese	Nickel	Vanadium
GMA Garnet™	●	●									
Waste Slag*		●	●	●	●	●	●	●	●	●	●
Silica Sand		●									
Metallic Abrasives	●										
Aluminum Oxide	●										
Crushed Glass	●										

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



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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