BLACK GARNET

BE BRILLIANT GO GREEN

ECOMATERIALS INC.

BLACK GARNET™

is synthetic garnet made via a world leading South Korean technology.
With high compressive and high hardness, it is an ideal abrasive.

1. General product information

• Product name	Black Garnet
• ISO standard	In compliance with international ISO standard 11126-6 for abrasives

2. Chemical analysis

Element	Test Result %	Min-Max % range	Test Method
SiO_2	15.6	15.0 - 24.0	ISO 26845 : 2012
Al_2O_3	5.8	5.0 - 13.0	ISO 26845 : 2012
Fe_2O_3	28.2	20.0 - 40.0	ISO 9507 : 2012
CaO	24.6	20.0 - 30.0	ISO 26845 : 2012
MgO	4.3	4.0 - 8.0	ISO 26845 : 2012
MnO	10.1	8.0 - 12.0	ISO 26845 : 2012
TiO_2	0.5	0.5 - 1.0	ISO 26845 : 2012
P_2O_5	0.2	0.2 - 0.4	ISO 26845 : 2012
Cr_2O_3	1.9	1.0 - 3.2	ISO 26845 : 2012
S	0.1	0.0 - 0.2	ISO 26845 : 2012
L.O.I	8.6	8.0 - 10.0	L.O.I : Loss of Ignition

3. Physical properties

Characteristic	Test result	Requirement	Test Method
• Apparent density (g/cm³)	3.45-3.60	n/a	ISO 11127-3
• Loose bulk density (g/cm³)	2.3	n/a	
• Hardness - Mohs	7.5	min. 6	ISO 11127-4
• Moisture	0.06%	max. 0.2%	ISO 11127-5
• Conductivity of aqueous extract	12mS/m	max. 25mS/m	ISO 11127-6
• Water-soluble chlorides	10ppm	25ppm	ISO 11127-7
• Free silica	Not Detected	<1% (not detectable)	
• Particle shape	Sub-angular / Round		
• Colour	Black		
• Corrosiveness	Black Garnet is inert		

4. Standard particle sizes

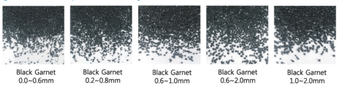
- Black Garnet is available as sub-angular & round material - see table below for characteristics.
- Particle size and distribution in compliance with ISO standard 11127 -2.
- Oversize and undersize fractions are max. 10% and max. 5% respectively.

Available standard particle sizes(mm)	Est. suface profile range (microns)	Est.consumption (kg/m²)	Suface Finishing	Applications
0.0 – 0.6	40 – 80	15 – 20	SA 3	Petrochemical • Oil & Gas
0.2 – 0.8	70 – 90	15 – 20	SA 3	
0.2 – 1.0	80 – 100	20 – 25	SA 3	
0.2 – 1.2	90 – 120	25 – 30	SA 3	
0.6 – 1.0	100 – 110	25 – 30	SA 2.5	Ship Building • Ship Repair
0.6 – 2.0	110 – 120	30 – 35	SA 2.5	
1.0 – 2.0	120 – 130	35 – 40	SA 2.5	

BLACK GARNET™

is an eco-friendly material certificated by environmental agencies that produces low dusting rates, has no free silica, and is therefore clean and safe to use.

5. Images of some standard particle sizes Sub-Angular / Round



Black Garnet 0.0–0.6mm | Black Garnet 0.2–0.8mm | Black Garnet 0.6–1.0mm | Black Garnet 0.6–2.0mm | Black Garnet 1.0–2.0mm

6. Standard packaging

Jumbo bags	with PE inside liner, wt 1.5 M.T (depending on customer requirements)
25kg bags	shrinkwrapped, on pallets of 1 M.T

7. Fire and Explosion Hazard Data

Flash point	n/a	• Flammable Limits	n/a
Extinguishing media	n/a	• LEL / Low er Explosion Level	n/a
Special Fire Fighting Procedures	n/a	• UEL / upper Explosion Level	n/a
Unusual Fire & Explosion Hazards	none known		

8. Waste disposal after use

Waste classification	Black Garnet is generally classified as a non-scheduled waste (apart from contamination in the used paint residues)
Recycling	Used material can be recycled

9. Reactivity

Stability	The material is stable
Hazardous polymerization	Does not occur
Odour	None

10. Storage and handling

Dust	Respirable dust may be generated during processing, handling.
PPE	Personal protection and dust controls should be applied.
Storage	Keep product dry until for effective use.

11. Manufacturer Information

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ECOMATERIALS INC.