

Technical Data Sheet Garnet (Gar-Mac)

Trade Name: Gar-Mac
Original Issue Date: September 2003
This Issue: February 2016

SECTION 1 Chemical Analysis

Rock or River Garnet of the Almandine/Almandite group. This is a natural mineral abrasive ever popular as an expendable blast media offering a cleaner application than traditional expendables, with improved cutting performance, compatibility to non-ferrous metals and low tendency to embedment and recyclability up to 5 cycles. The product is tested in accordance with ISO11126-10 and ISO11127-6&7 and is in compliance with Rolls Royce CSS211 specification. In 80W, 80F and 120W formats the media is used extensively as a waterjet cutting media, as indicated above compliant to CSS211 and ISO11126-10 specification.

Chemical Analysis	Chemical Formula	Typical Content %
Silicon Dioxide (amorphous)	SiO ²	36.1
Aluminium Oxide	Al ² O ³	20.4
Iron Oxide	FeO	29.8
Iron III Oxide	Fe ² O ³	1.8
Titanium Oxide	TiO ²	1.8
Manganese Oxide	MnO	1.05
Calcium Oxide	CaO	1.55
Magnesium Oxide	MgO	6.0
Free Silica		<1

SECTION 2 Physical Properties

Shape	Semi- angular (sharp)
Colour	Deep ruby red
Specific Gravity	4.1 g/cc
Bulk Density	2.38 g/cc
Hardness	7-8 moh
Chloride Content	<30ppm
Typical Conductivity	,25mS/m
Packaging	25kg or 1MT

SECTION 3

Particle Size Distribution

Grade	Profile Range	Size Range	Comment
Waterjet Cutting Grades			
80W	N/A	150-155 micron	Optimised waterjet cutting grade
80F	N/A	115-355 micron	Easiflow waterjet cutting grade
120W	N/A	106-250 micron	Fine cutting waterjet grade
Blasting and Filtration Grades			
80B	20-50 micron	150-425 micron	Fine blasting grade – masonry
30/60	50-75 micron	250-600 micron	Medium Fine – paint preparation
20/40	70-110 micron	425-850 micron	Medium Coarse – rust removal
12/25	80-120 micron	700-1700 micron	Coarse – scale and heavy rust removal
8/16	N/A	2360-1180 micron	Extra coarse – filter media/extra heavy blasting/scale removal

SECTION 4

Compliance

This product is exempt from registration under REACH regulations. See SDS 42A on our web site.

Special Precautions -In use, protection is required to meet threshold limit values for general dusts of 10 mg/m³ (for total inhalable dust) and 5 mg/m³ (respirable dust). Please also note the OELs for amorphous silicon dioxide dust of 6mg (inhalable) and 2.4 mg/m³ (respirable). The user must establish any hazards present in the surface coatings being removed, which may reduce the occupational exposure standard (O.E.S.). The Petroleum section of the National Safety Council carried out research and concluded that the sparks generated when grit blasting are not capable of igniting inflammable atmospheres providing special precautions are taken. These results were later confirmed by a leading U.K. Oil Company. Refer to our Technical Dept. for copies of reports.

SECTION 5

Disposal

The abrasive must be disposed of in accordance with national legislation (See Section 16) and local regulations. The material as supplied is classed as a non-hazardous inert solid waste. Spent abrasive used as a blasting medium must be disposed of under classification 12 01 16 (waste blasting material containing dangerous substances) or 12 01 17 (waste blasting material other than those mentioned in 12 01 16). The waste producer must determine if hazardous substances in the coating being removed are likely to cause the waste to be hazardous.

SECTION 6

Handling and Storage

Load per pallet should not exceed 2 tonnes and the pallets should not be stacked more than two high. Material should be kept dry.