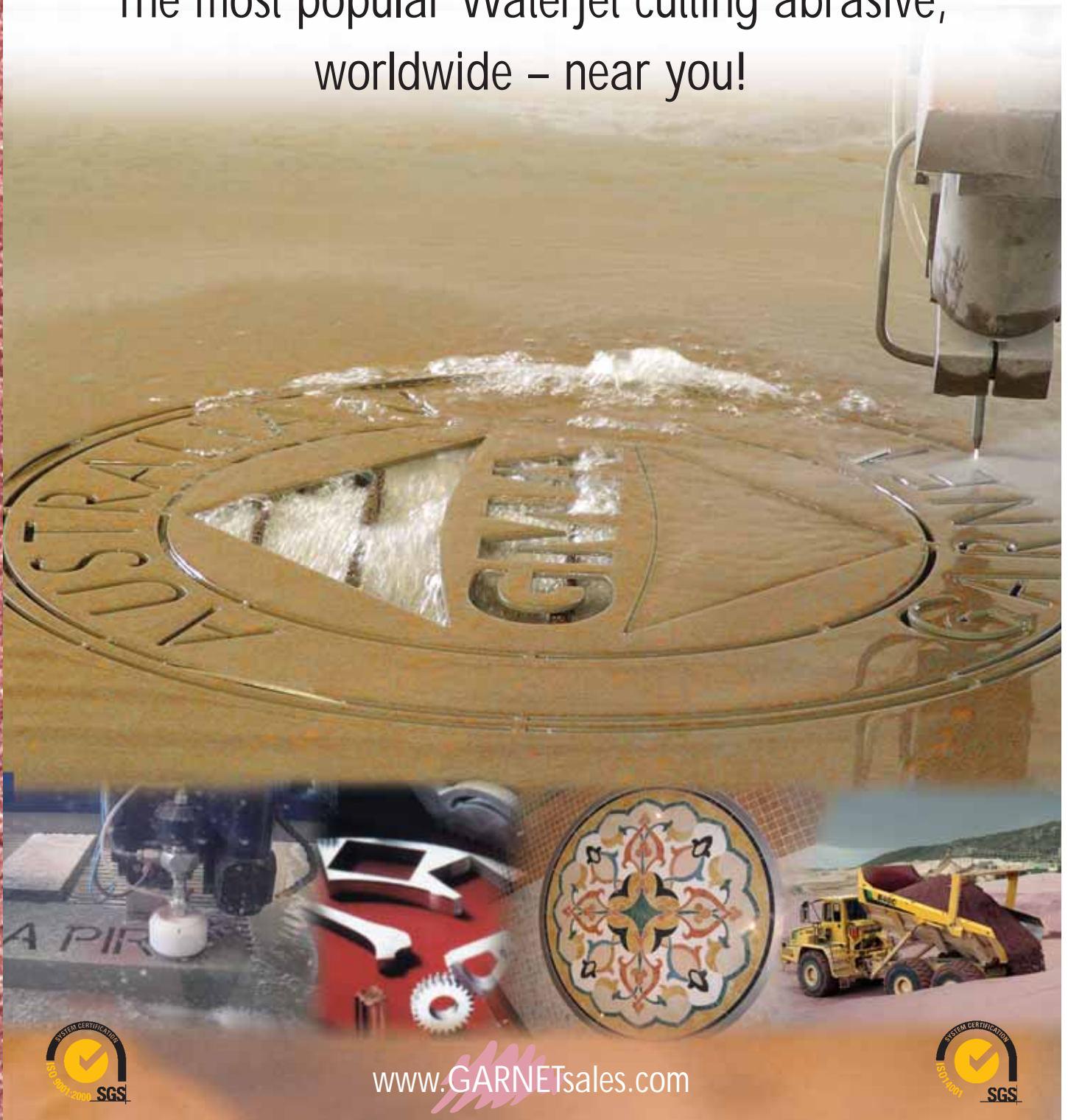




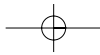
GMA GARNET®

The most popular Waterjet cutting abrasive,
worldwide – near you!



www.GARNETsales.com





GMA Garnet

The **GMA Garnet group** is the global market leader of high quality waterjet cutting garnet abrasives. Mining and processing facilities are located approximately 500km north of Perth, Western Australia. **GMA Garnet's** Head office is located in Perth, Western Australia and regional distribution centres are located in Hamburg and Frankfurt (Germany), Manchester (UK), Dubai (UAE), Houston (USA) plus many more regional GMA sales locations and distributors around the world.

GMA Garnet owns and operates the world's largest mining and processing facility of industrial garnet. **GMA Garnet** is processed to the highest quality, with strict in house and external quality control at every stage of processing, grading, packaging and transportation. This ensures a constant high quality standard from the mining/processing right through to the end user.

GMA Garnet is certified under ISO 9001:2000 Quality Management Systems, demonstrating our commitment to product quality and customer service. **GMA Garnet** is also certified under ISO 14001:2004 Environmental Management Systems demonstrating **GMA Garnet's** commitment to the environment with a socially responsible production process.

GMA Garnet consists of totally natural Almandite garnet known for its superior hardness and abrasive ability. **GMA Garnet** is free of any heavy metals or toxic compounds and meets all Occupational Health and Safety regulations. **GMA Garnet** provides a perfect balance of grain shape (sub angular) size and density.

GMA Garnet is extensively used in all renowned waterjet cutting machines the world over.



Waterjet Cutting Applications

GMA Garnet Waterjet cutting abrasives grades are available to meet all of your specific project requirements. **GMA Garnet** is ideally suited for all applications including:

- Carbon steel
- Copper
- Granite
- Aluminium
- Rubber
- Glass
- Stainless steel
- FRP / CRP
- Marble
- Wood



Why GMA Garnet -

You've made a significant investment in your Waterjet cutting equipment, with **GMA Garnet** you can be confident you maximise production and safeguard your investment.

GMA Garnet's world best processing ensures highest purity garnet and highly accurate sizing of grains. This ensures there is no dust or ineffective fine grains to restrict garnet free flow, and no oversize grains to block focusing tubes. A steady flow of garnet to the focusing tube and no blockages allows uninterrupted production without downtime resulting in optimum efficiency and lowest production costs.

You can be confident that each delivery and each bag of **GMA Garnet** is up to the same highest quality standard that you would expect from the world's leading supplier of premium Waterjet abrasives.

Millions of years of weathering means that **GMA Garnet's** hard and tough sub angular grains provide the perfect balance between cutting speed and edge quality with reduced wear and tear to equipment and in particular the cutting head and focusing tube. The reduced wear and tear on components using **GMA Garnet** alluvial grains result in direct cost savings and longer service life.

High quality alluvial garnet does not contain any fracture lines that weaken the grain inherent with crushed garnet.

GMA Garnet Optimum Setup

GMA Garnet offers a choice of grade to match any focusing tube and orifice for any given cutting application.

GMA Garnet 80 Mesh, the most popular waterjet abrasive grade used worldwide, delivers the optimum balance of cutting speed and precision edge.

For high speed cutting, we recommend **GMA Garnet 50 or 60 Mesh**, which in some cases can deliver up to a 30% increase in cutting speed, but at the expense of a reduced precision edge.

Where a high precision and minimum tolerance edge is required, we recommend **GMA Garnet 100 or 120 Mesh**.

Please refer to the table at the right for the correct combinations of **GMA Garnet** grades, focusing tube and orifice dimensions to suit your particular waterjet cutting requirements.



	GMA Garnet Grade	Focusing Tube	Orifice
Industry Standard Configuration	80 mesh	0.4"	0.013-0.014"
	300-150 micron	1.02mm	0.330-0.356mm
High Speed Cutting	60 mesh	0.5"	0.014-0.018"
	400-200 micron	1.27mm	0.356-0.457mm
	50 mesh 600-200 micron		
High Precision Edge	80 mesh	0.36"	0.012-0.013"
	300-150 micron	0.91mm	0.305-0.330mm
	120 mesh 200-100 micron		
Super Fine Precision Edge	120 mesh	0.3"	0.010-0.011"
	200-100 micron	0.76mm	0.254-0.279mm



Product Data Sheet

Waterjet Grade Product Range

typical weight % retained

	50 Mesh (600-200)	60 Mesh (400-200)	80 Mesh (300-150)	120 Mesh (200-100)
US Mesh microns				
35	500	2	-	-
40	425	14	0.2	-
45	355	45	10	-
50	300	85	45	20
60	250	96	78	50
70	212	95	96	85
80	180	99.9	99	95
90	150	-	99.8	99
115	125	-	-	99
150	106	-	-	99.9

Packaging:

- 80 x 25kg multilayer paper bags shrinkwrapped to 2 MT pallets, or
- 80 x 25kg multilayer paper bags packed into 2 MT bulk bags, or
- 2 MT top and bottom spouted bulk bags with internal PVC liner

Mineral Composition (Typical)

Garnet (Almandite).....	97-98 %
Ilmenite.....	1-2 %
Zircon.....	0.20 %
Quartz (free silica).....	<0.5 %
Others.....	0.25 %

Physical Characteristics (typical)

Bulk Density.....	2.3 T/m ³
Specific Gravity.....	4.1
Hardness (Moh).....	7.50 – 8.0
Melting Point.....	1250 °C
Shape of natural grains.....	sub-angular

Average Chemical Composition (Typical)

SiO ₂ *	36 %
Al ₂ O ₃	20 %
FeO	30%
Fe ₂ O ₃	2 %
TiO ₂	1 %
MnO	1 %
CaO	2 %
MgO	6 %

* refers to SiO₂ bound within the lattice of the homogenous garnet crystal (no free silica)

Other Characteristics (Typical)

Conductivity.....	10-15ms/m (max 25ms/m)
Radioactivity.....	Not detectable above background
Moisture Absorption.....	Non-hygroscopic, inert
Total Chlorides.....	10-15ppm (max 25ppm)
Ferrite (free iron).....	< 0.01 %*
Lead.....	< 0.002 %*
Copper.....	< 0.005 %*
Other Heavy Metals.....	< 0.01 %*
Sulphur.....	< 0.01 %*

* Generally below detectable levels.

