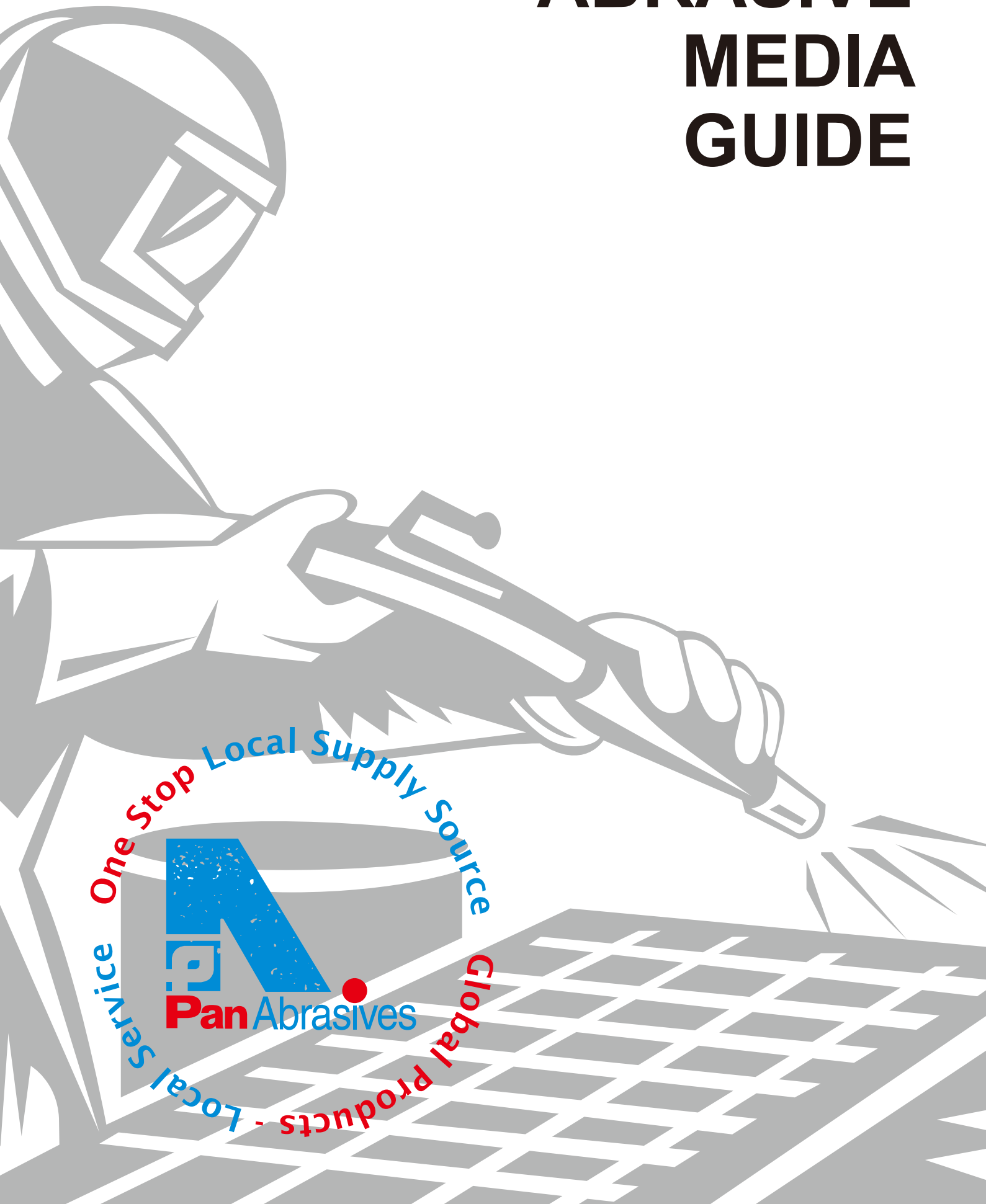
ABRASIVE MEDIA GUIDE



One Stop Local Supply Source

Global Products - Local Service

PanAbrasives

Company Profile

Since 1973, Pan Abrasives has played a leading role with a comprehensive supply program supporting both local and regional surface preparation and finishing industry requirements.

This "Global Products Local Service" comprehensive supply program includes abrasive blasting media such as EnviroGrit™ Garnet, QuickCut™ Aluminium Oxide, PanaShot™ Steel Shot, PanaGrit™ Steel Grit, BrightBlast™ Glass Beads, etc. and complementary PanBlast™ equipment and accessories for abrasive blasting such as pressure blast pots, suction and pressure blast cabinets, personal protective equipment, airless painting systems, airless wheel blast parts, etc.

With our ready stock of products in both Singapore and Malaysia, we are well equipped to be your "One Stop Local Supply Source" via our team of sales and service personnel who are just one phone call away!

Visit www.pan-abrasives.com to view high-resolution images and e-catalogs of our broad product range.

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		Nozzle Pressure - psi (kpa)						
Nozzle - Φ inch - Φ mm	**Air, Power & Abrasive Requirement**	**50 (345)**	**60 (414)**	**70 (483)**	**80 (552)**	**90 (621)**	**100 (689)**	**125 (862)**
#2 - 1/8" - 3.2 mm	Air - ft^3/min (m^3/min)	12 (0.34)	13 (0.37)	15 (0.42)	18 (0.51)	19 (0.54)	21 (0.59)	26 (0.74)
	Power - hp (kw)	1.75 (1.30)	2 (1.49)	2.5 (1.86)	3 (2.24)	3.5 (2.61)	4 (2.98)	6 (4.47)
	Abrasive - lb/hr (kg/hr)	70 (32)	80 (36)	90 (41)	100 (45)	110 (50)	120 (54)	135 (61)
#3 - 3/16" - 4.8 mm	Air - ft^3/min (m^3/min)	25 (0.71)	30 (0.85)	35 (0.99)	40 (1.13)	43 (1.22)	45 (1.27)	60 (1.70)
	Power - hp (kw)	5 (3.73)	8 (5.97)	9 (6.71)	9.5 (7.08)	10 (7.46)	10.5 (7.83)	16 (11.93)
	Abrasive - lb/hr (kg/hr)	150 (68)	170 (77)	200 (91)	215 (98)	240 (109)	260 (118)	320 (145)
#4 - 1/4" - 6.4 mm	Air - ft^3/min (m^3/min)	50 (1.42)	55 (1.56)	60 (1.70)	70 (1.98)	75 (2.12)	80 (2.27)	95 (2.69)
	Power - hp (kw)	10 (7.46)	12 (8.95)	13 (9.69)	16 (11.93)	17 (12.68)	18 (13.42)	25 (18.64)
	Abrasive - lb/hr (kg/hr)	270 (122)	300 (136)	350 (159)	400 (181)	450 (204)	500 (227)	675 (306)
#5 - 5/16" - 8 mm	Air - ft^3/min (m^3/min)	80 (2.27)	90 (2.55)	100 (2.83)	115 (3.26)	125 (3.54)	140 (3.96)	190 (5.38)
	Power - hp (kw)	17 (12.68)	20 (14.91)	25 (18.64)	27 (20.13)	28 (20.88)	30 (22.37)	36 (26.85)
	Abrasive - lb/hr (kg/hr)	470 (213)	530 (240)	600 (272)	675 (306)	750 (340)	825 (374)	1000 (454)
#6 - 3/8" - 9.5 mm	Air - ft^3/min (m^3/min)	110 (3.12)	125 (3.54)	145 (4.11)	160 (4.53)	175 (4.96)	200 (5.66)	275 (7.79)
	Power - hp (kw)	25 (18.64)	29 (21.63)	32 (23.86)	35 (26.10)	40 (29.83)	45 (33.56)	57 (42.50)
	Abrasive - lb/hr (kg/hr)	675 (306)	775 (352)	875 (397)	975 (442)	1060 (481)	1100 (499)	1350 (612)
#7 - 7/16" - 11 mm	Air - ft^3/min (m^3/min)	150 (4.25)	170 (4.81)	200 (5.66)	215 (6.09)	240 (6.80)	255 (7.22)	315 (8.92)
	Power - hp (kw)	35 (26.10)	40 (29.83)	45 (33.56)	50 (37.28)	55 (41.01)	60 (44.74)	70 (52.20)
	Abrasive - lb/hr (kg/hr)	900 (408)	1000 (454)	1200 (544)	1300 (590)	1400 (635)	1550 (703)	1800 (816)
#8 - 1/2" - 12.7mm	Air - ft^3/min (m^3/min)	200 (5.66)	225 (6.37)	250 (7.08)	275 (7.79)	300 (8.50)	340 (9.63)	430 (12.18)
	Power - hp (kw)	45 (33.56)	50 (37.28)	55 (41.01)	63 (46.98)	70 (52.20)	75 (55.93)	95 (70.84)
	Abrasive - lb/hr (kg/hr)	1200 (544)	1350 (612)	1500 (680)	1700 (771)	1850 (839)	2025 (919)	2525 (1145)
#10 - 5/8" - 16 mm	Air - ft^3/min (m^3/min)	300 (8.50)	350 (9.91)	400 (11.33)	450 (12.74)	500 (14.16)	550 (15.58)	700 (19.82)
	Power - hp (kw)	70 (52.20)	80 (59.66)	90 (67.11)	100 (74.57)	110 (82.03)	120 (89.48)	150 (111.85)
	Abrasive - lb/hr (kg/hr)	1900 (862)	2200 (998)	2400 (1089)	2700 (1225)	3000 (1361)	3300 (1497)	4000 (1814)
#12 - 3/4" - 19 mm	Air - ft^3/min (m^3/min)	430 (12.18)	500 (14.16)	575 (16.28)	650 (18.41)	700 (19.82)	800 (22.66)	1100 (31.15)
	Power - hp (kw)	100 (74.57)	115 (85.76)	130 (96.94)	145 (108.13)	160 (119.31)	175 (130.50)	215 (160.33)
	Abrasive - lb/hr (kg/hr)	2700 (1225)	3100 (1406)	3500 (1588)	3900 (1769)	4300 (1950)	4700 (2132)	5700 (2586)

Note:
This table is to be used for reference only.
The abrasive quantity requirements are based on sand with a bulk density of 100lb/ft^3.
Results will vary with different abrasive types.

Condition A
Unblasted

Condition B
Unblasted

Condition C
Unblasted

Condition D
Unblasted

Condition A
Blasted to Sa1

Condition B
Blasted to Sa1

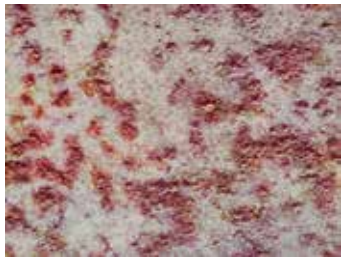
Condition C
Blasted to Sa1

Condition D
Blasted to Sa1

Condition A
Blasted to Sa2

Condition B
Blasted to Sa2

Condition C
Blasted to Sa2



Condition D
Blasted to Sa2

Condition A
Blasted to Sa2.5

Condition B
Blasted to Sa2.5

Condition C
Blasted to Sa2.5

Condition D
Blasted to Sa2.5

Condition A
Blasted to Sa3

Condition B
Blasted to Sa3

Condition C
Blasted to Sa3

Condition D
Blasted to Sa3

Note:
The above pictures are for information purposes only to illustrate various blasted surface cleanliness levels.
Do not use this illustration as a blasted surface cleanliness comparator.
Surface cleanliness comparators are available from the International Organization for Standardization (ISO).

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Abrasive Comparison Chart

ABRASIVE	TYPE	SHAPE	HARDNESS	BULK DENSITY (kg/m³)	SPECIFIC GRAVITY	COMPARATIVE RECYCLABILITY
Ceramic Beads	M	Spherical	65 HRC	2300	3.76	High
Cut Wire - Carbon Steel	M	Cylindrical - Spherical	440 - 500 HV	4400	7.6	High
Cut Wire - Stainless Steel	M	Cylindrical - Spherical	300 - 600 HV	4400	7.6	High
Granite Cutting Grit	M	Angular	63 - 67 HRC	3700	7.6	High
Stainless Steel Shot	M	Spherical	300 HV	4500	7.8	High
Steel Grit - GP	M	Angular	46 - 50 HRC	3700	7.6	High
Steel Grit - GL			56 - 60 HRC			
Steel Grit - GH			Min 60 HRC			
Steel Shot - Normal	M	Spherical	40 - 50 HRC	4450	7.4	High
Steel Shot - Peening - Regular			45 - 52 HRC			
Steel Shot - Peening - Hard			55 - 62 HRC			
Chilled Iron Grit	M	Angular	62 HRC	3990	7.0	Medium - High
Chilled Iron Shot	M	Spherical	62 HRC	4250	7.0	Medium - High
Cut Wire - Aluminium	M	Cylindrical - Spherical	40 - 60 HV	1500	2.7	Medium - High
Cut Wire - Zinc	M	Cylindrical - Spherical	35 - 55 HV	4100	7.1	Medium - High
Zinc Shot	M	Spherical	35 - 55 HV	4200	7.1	Medium - High
Aluminium Oxide	M	Angular	9.0 MOH	2400	3.9 - 3.94	Medium
DeFlash Media	M	Angular - Spherical	5.5 - 9.0 MOH	1500 - 2400	2.45 - 2.5	Medium
Glass Beads	M	Spherical	5.5 MOH	1500	2.45 - 2.5	Medium
Milling Beads	M	Spherical	6.0 MOH	1600	2.5	Medium

Figures may vary depending on raw materials and manufacturing processes.
M = Manufactured N = Naturally Occurring B = By Product

ABRASIVE	TYPE	SHAPE	HARDNESS	BULK DENSITY (kg/m³)	SPECIFIC GRAVITY	COMPARATIVE RECYCLABILITY
Plastic PA	M	Cubical	60 - 87 HRM	700	1.03 - 1.16	Medium
Plastic PB	M	Spherical	70 - 74 HRM	650 - 700	1.04 - 1.07	Medium
Plastic PC	M	Cylindrical	71 - 75 HRM	700 - 750	1.1 - 1.34	Medium
Plastic KA	M	Cubical Cylindrical	110 HRr	700	1.13	Medium
Plastic KG	M	Cylindrical	120 HRr	700	1.19	Medium
Plastic Type I	M	Angular	3.0 MOH	642 - 802	1.15 - 1.25	Medium
Plastic Type II	M	Angular	3.5 MOH	930 - 962	1.47 - 1.52	Medium
Plastic Type III	M	Angular	4.0 MOH	930 - 962	1.47 - 1.52	Medium
Plastic Type V	M	Angular	3.5 MOH	642 - 802	1.1 - 1.2	Medium
Plastic Type VI	M	Angular	3.0 MOH	642 - 802	1.28 - 1.33	Medium
Plastic Type X	M	Angular	3.2 MOH	642 - 802	1.1 - 1.2	Medium
Plastic Type A	M	Angular	4.0 MOH	642 - 802	1.47 - 1.52	Medium
Plastic Type L	M	Angular	3.5 MOH	642 - 802	1.1 - 1.2	Medium
Line Marking Beads	M	Spherical	5.5 - 6.0 MOH	1600	2.5	Medium
Silicon Carbide	M	Angular	9.15 MOH	1760	3.2	Medium
Apricot	N	Angular	3.0 - 4.0 MOH	725	1.4	Medium - Low
Corn	N	Angular	2.0 - 2.5 MOH	600	1.15	Medium - Low
Garnet	N	Angular	7.5 - 8.0 MOH	2400	4.1	Medium - Low
Olivene	N	Angular	7.0 - 7.5 MOH	1250 - 1314	2.7 - 2.9	Medium - Low
Walnut	N	Angular	2.5 - 3.0 MOH	725	1.28	Medium - Low
Coal Slag	B	Angular	6.0 - 7.0 MOH	1350	2.63	Low
Copper Slag	B	Angular	6.0 - 7.0 MOH	1900	3.4	Low
Crushed Glass	B	Angular	6.0 MOH	1300	2.5	Low
Silica Sand	N	Angular	5.0 - 6.0 MOH	1500	2.65	Low
Tin Slag	B	Angular	7.0 MOH	1800	3.2	Low

Figures may vary depending on raw materials and manufacturing processes.
M = Manufactured N = Naturally Occurring B = By Product

QuickCut™ Aluminium Oxide

Product Description and Technical Data:

QuickCut™ Aluminium Oxide is one of the most economical processing medias for many dry and wet process applications where anything from a coarse profile to a micro finish is required.

This sharp, angular abrasive is the second hardest mineral after diamond and is especially suitable when no ferrous contamination can be tolerated on the processed surface.

It can be used for the roughest cutting-down operations or in well-conditioned, pebbled form for producing very low microinch finishes on precision dimensioned parts. Its high density and sharp, angular structure make it one of the fastest cutting abrasives available.

QuickCut™ is obtained by a process of electrically fusing and processing high-grade Bauxite to produce Brown Aluminium Oxide, and high-grade Alumina in the case of White and Pink Aluminium Oxide. Their crystalline nature contributes to their hard and fast cutting properties. It is also used widely in the manufacture of bonded and coated abrasives.

QuickCut™ can be recycled many times depending on the grade of material and the actual process and may be used in most types of standard abrasive blasting equipment.

QuickCut™ Abrasive Properties:

Shape	Angular
Hardness (Moh Scale)	9
Particle S.G.	3.9 - 3.94
Colour	Brown, Pink, White
Bulk Density (kg/m³)	2400
Size Standard	FEPA / ANSI

QuickCut™ Typical Chemical Composition:

	Brown # 120 and below	Brown # 150 - # 220	Brown # 240	Pink	White
Al_2O_3	≥ 95.0 %	≥ 93.0 %	≥ 92.0 %	≥ 99.0 %	≥ 99.0 %
TiO_2	≤ 3.0 %	≤ 3.6 %	≤ 4.5 %	N/A	N/A
SiO_2	≤ 1.3 %	≤ 1.5 %	≤ 2.0 %	< 0.2 %	< 0.1 %
Cr_2O_3	N/A	N/A	N/A	< 0.5 %	N/A
Fe_2O_3	≤ 0.16 %	≤ 0.3 %	≤ 0.4 %	< 0.15 %	< 0.1 %
CaO	≤ 0.5 %	≤ 0.6 %	≤ 0.7 %	< 0.5 %	< 0.5 %
Na_2O	N/A	N/A	N/A	< 0.5 %	< 0.5 %

QuickCut™ Available Sizes:

Grade	12	14	16	20	24	30	36	40	46
Microns	1400 - 2000	1180 - 1700	1000 - 1400	850 - 1180	600 - 850	410 - 500	425 - 600	355 - 500	300 - 425
Inch	.055 - .078	.046 - .067	.040 - .055	.033 - .046	.023 - .033	.016 - .019	.017 - .023	.014 - .019	.012 - .017

Grade	60	80	90	100	120	150	180	220	240
Microns	212 - 300	150 - 212	125 - 180	106 - 150	90 - 125	63 - 106	53 - 90	45 - 75	28 - 70
Inch	.008 - .012	.006 - .008	.005 - .007	.004 - .006	.003 - .005	.0025 - .004	.002 - .003	.0018 - .003	.001 - .0027

Other non-standard sizes available upon request

QuickCut™ Packaging:

25kg Bags	1 Tonne Pallet (40 x 25kg Bags)

QuickCut™ Ordering Information:

Stock Code	**AAL**-XXXYZ
Key	XXX - Mesh Size (e.g. 030 for Mesh 30) Y - B for Brown Y - P for Pink Y - W for White Z - Blank for Standard Grade Z - P for Premium Grade

CeraPeen™ Ceramic Beads and Shot

Product Description and Technical Data:

CeraPeen™ Ceramic Beads and Shot are manufactured by an electric/thermal fusion of oxides. The internal structure is made up of a crystalline ceramic phase, bonded by an amorphous silica phase, resulting in high impact properties coupled with good hardness.

CeraPeen™ Beads are generally used for the surface treatment of components such as: rubber and plastic moulds, castings, boiler and heat exchanger parts. CeraPeen™ shot is used for the peening and peen forming of components, specifically in the aerospace industry.

When used for peening applications, CeraPeen™ Ceramic Shot offers several advantages over traditional peening media, such as steel shot and glass beads. The media can achieve peening intensities similar to those obtainable with steel shot, but with a resulting lower surface roughness. CeraPeen™ may also be used in peening applications where steel shot cannot be used due to potential ferrous contamination from the steel media.

The high density of CeraPeen™ Shot enables peening intensities, equivalent to those obtainable with glass beads, to be obtained at a greatly reduced abrasive velocity. This feature results in far less abrasive breakdown and thus less dust, a cleaner working environment and better operator visibility.

The narrow particle size distribution coupled with low breakdown rates, up to 15:1 in favour of CeraPeen™ when compared to glass beads, enables repeatable, consistent results to be achieved, a critical consideration when selecting a media for peening applications.

CeraPeen™ Abrasive Properties:

Shape	Smooth Spherical Beads
Hardness (HRC)	65
True Relative Density	3.85
Bead Relative Density	3.76
Bulk Density (kg/m³)	2300
Size Standard	Z - AMS 2431/7
	B - NF L 06.824

CeraPeen™ Abrasive Properties:

Typical Crystallographic Analysis:	
Zirconia	67 %
Glassy Silica Phase	33 %

Typical Chemical Composition:	
ZrO_2	67 %
SiO_2	30 %
Others	3 %

CeraPeen™ Available Sizes:

Grade	B20	B30	B40	B60	B120	B125	B205
Microns	600 - 850	425 - 600	250 - 425	125 - 250	70 - 125	0 - 125	0 - 63
Inch	.023 - .033	.016 - .023	.01 - .016	.005 - .01	.003 - .005	0 - .005	0 - .002

Grade	Z850	Z600	Z425	Z300	Z210	Z150	Z100
Microns	850 - 1180	600 - 850	425 - 600	300 - 425	210 - 300	150 - 210	100 - 150
Inch	.033 - .04	.023 - .033	.016 - .023	.01 - .016	.008 - .01	.006 - .008	.004 - .006

CeraPeen™ Packaging:

25kg Pails

CeraPeen™ Ordering Information:

Stock Code	**AOT-OAZI**XYYY
Key	X - Type of Material (B = B type, S = Z type) YYY - Product Size (e.g. Z300, YYY = 300)

NaturalGrit™ Cereal Abrasives

Product Description and Technical Data:

NaturalGrit™ Cereal Abrasives are a family of abrasives manufactured and processed from natural agricultural fibers, to produce a soft blasting media conforming to international standards such as SAE and JIS.

NaturalGrit™ is produced in 3 types, Type A - Apricot; Type C - Corn Cob and Type W - Walnut. The major advantage NaturalGrit™ has over more aggressive abrasives is that fragile components can be cleaned or deflashed without incurring any damage or etching on the underlying surface. The low oil content of NaturalGrit™ makes it an ideal abrasive for deflashing electronic components when no oil residue is permitted to remain on the parts.

The low oil content, along with its low combustion temperature, also makes NaturalGrit™ ideally suited for removing burnt on deposits from automobile super chargers and turbine blades, as an expendable blasting abrasive; the product simply burns off after blasting without leaving any residue. As such, the product finds applications in power generation stations, turbine overhaul factories and in the aerospace industry.

Both Types A and W, the heaviest and the lightest respectively, of NaturalGrit™ are widely used for cleaning moulds, motor armatures and motor drives prior to rewinding. Type C NaturalGrit™ is high absorbent and its main use is mass finishing processes for drying and absorbing water, oil or wax from processed parts and also for fine polishing or brightening of parts.

Being a naturally occurring agricultural product, no hazardous waste is produced by the abrasive, thus environmental concerns and disposal costs are negated.

NaturalGrit™ Abrasive Properties:

NaturalGrit™	Apricot Type A	Corn Cob Type C	Walnut Type W
Fibre Content %	92.2	94.4	90.4
Oil Content %	0.1	0.2	0.4
Water Content %	7.7	5.4	8.7
Hardness (Moh Scale)	3.0 - 4.0	2.0 - 2.5	2.5 - 3.0
Specific Gravity	1.4	1.15	1.28
Bulk Density (kg/m³)	725	600	725
Acidity pH	4 - 6	5 - 7	4 - 6

NaturalGrit™ Available Sizes:

Grade	6/8	12/20	20/30	20/40	30/40	40/60
Microns	2360 - 3350	850 - 1700	600 - 850	425 - 850	425 - 600	250 - 425
Inch	0.090 - 0.131	0.033 - 0.066	0.023 - 0.033	0.016 - 0.033	0.016 - 0.023	0.009 - 0.016
Type	C	A, C	A, C	A, C	A, C	A, C

Grade	8	10	12	16	20	36	46
Microns	2360	2000	1700	1180	850	425	355
Inch	0.093	0.079	0.067	0.046	0.033	0.016	0.014
Type	W	W	W	W	W	W	W

Other sizes available upon request

NaturalGrit™ Packaging:

20kg Bags	0.5 Tonne Pallet (25 x 20kg Bags)

NaturalGrit™ Ordering Information:

Stock Code	AXX-YY-ZZ
Key	XX - AG for Type A Apricot Grit XX - OT for Type C Corn Cob XX - WS for Type W Walnut YY - Upper Mesh Size (e.g. YY = 06 for Mesh 6/8) ZZ - Lower Mesh Size (e.g. ZZ = 08 for Mesh 6/8) - Blank for Single Mesh

FastBlast™ Chilled Iron Grit

Product Description and Technical Data:

FastBlast™ Chilled Iron Grit is a sharp, hard, angular, metallic abrasive ideally suited for extremely fast blast cleaning of steel and iron components.

The friability of FastBlast™ results in it breaking down to form smaller particles, inheriting the same sharp, angular properties and shape as the original particles. This unique feature contributes to the superior rapid cleaning rates and high productivity.

As the particle shape is constantly maintained, the abrasive is also suitable when a repeatable, consistent surface profile and finish is required.

FastBlast™ is ideally suited for compressed air blasting applications especially when a high production rate is required. Being lower in cost, FastBlast™ is an economical alternative to steel abrasives, in situations where 100% of the abrasive cannot be retained for recycling.

If recycling facilities can be utilised, FastBlast™ also offers a viable alternative to copper slag or other expendable abrasives, as it may be recycled up to 50 times.

FastBlast™ can also be used as a high aggregate in marine ballast applications. These high-density aggregates are also used for hazardous radiation shielding purposes.

FastBlast™ Abrasive Properties:

Shape	Sharp, Angular	**Foreign Matter %**	< 1.0
Hardness (HRC min)	62	**Total Carbon %**	2.50 - 3.00
Bulk Density (kg/m³)	3990	**Silicon %**	1.40 - 1.80
Particle S.G.	7.0	**Manganese %**	0.30 - 0.50
Colour	Silvery, Light Brown	**Sulphur %**	0.14 - 0.20
Size Standard	BSS	**Phosphorus %**	0.50 - 1.00

FastBlast™ Available Sizes:

Grade	G02	G05	G07	G12	G17	G24
Microns	120	120 - 130	180 - 420	300 - 710	420 - 850	600 - 1000
Inch	.004	.004 - .011	.007 - .016	.011 - .027	.015 - .033	.023 - .039

Grade	G34	G39	G47	G55	G66	G80
Microns	850 - 1180	1000 - 1400	1180 - 1700	1400 - 2000	1700 - 2360	2000 - 2800
Inch	.033 - .046	.039 - .055	.046 - .066	.055 - .078	.066 - .092	.078 - .110

FastBlast™ Packaging:

25kg Bags or Drums of 750kg/800kg	1 Tonne Pallet (40 x 25kg Bags) or Drums

FastBlast™ Ordering Information:

Stock Code	**ASA-CIG**XXX
Key	XXX - Product Grade BSS (e.g. 017 for G17)

FastBlast™ Chilled Iron Shots

Product Description and Technical Data:

FastBlast™ Chilled Iron Shots are manufactured from hypo-eutectic composition iron to produce a structure of iron carbide in a martensite matrix.

Iron abrasives are hard and break down in a manner which ensures continual exposure of new sharp cutting edges. It is this mechanism which provides their characteristic rapid cleaning action and a silvery, sharp edged profile to surfaces after blast treatment.

Chilled Iron Shots are made in accordance with technical specification of BS 2451.

Spherical particle shaped, available in a wide range of sizes from 8mm down and including all the shot grades contained in BS 2451 specification, which are generally used in non-abrasive applications.

Ferroden (R)/Ballast-Pak (R) - specially blended forms of iron abrasives, both round and angular designed to satisfy individual requirements in high density aggregate and shielding type applications.

Other typical applications include: vibration and noise suppression, wear resistant surfaces, roll etching, stone sawing, etc..

FastBlast™ Abrasive Properties:

Shape	Spherical	**Total Carbon %**	2.50 - 3.00
Hardness (HRC min)	62	**Silicon %**	1.40 - 1.80
Bulk Density (kg/m³)	4250	**Sulphur %**	0.14 - 0.20
Particle S.G.	7.0	**Manganese %**	0.30 - 0.50
Size Standard	BSS	**Phosphorus %**	0.50 - 1.00

FastBlast™ Available Sizes:

BSS (BS2451)	S070	S120	S170	S240	S340
Mesh Size (mm)	0.18 - 0.42	0.30 - 0.60	0.42 - 0.85	0.60 - 1.00	0.85 - 1.40
MIN% between sizes shown	80%	80%	85%	85%	85%

BSS (BS2451)	S390	S470	S550	S660	S800
Mesh Size (mm)	1.00 - 1.70	1.18 - 2.00	1.40 - 2.00	1.70 - 2.36	2.00 - 2.80
MIN% between sizes shown	85%	85%	85%	85%	85%

FastBlast™ Packaging:

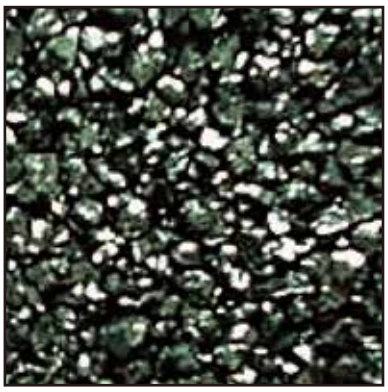
25kg Bags or Drums of 750kg/800kg	1 Tonne Pallet (40 x 25kg Bags) or Drums

FastBlast™ Ordering Information:

Stock Code	**ASA-CIS**XXX
Key	XXX - Product Grade BSS (e.g. 170 for S170)

JetBlast™ Copper Slag

Product Description and Technical Data:



JetBlast™ Copper Slag is a by-product produced in the manufacture of copper. During the smelting and quenching process, in the copper smelter, mineral slag is converted to Iron Silicate, thus producing raw copper slag. The raw copper slag is then processed at up to 90 tonnes per hour, to produce JetBlast™. JetBlast™ is produced from 100% raw copper slag and is not mixed with recycled copper slag or tin slag. Additions of either of these two products can significantly increase levels of Radioactivity and Conductivity.

JetBlast™ is a low cost expendable material suited for open blast cleaning and due to its low silica content does not pose the health hazards created by silica sand. Its sharp, hard cutting edges provide a fast cleaning action and excellent surface profile preparation. JetBlast™ is one of the most economical expendable abrasives available for cleaning steel surfaces where recovery and reuse are not practical.

Coarse grade JetBlast™ is used predominantly in shipyards for the removal of heavy corrosion and coatings leaving a typical surface profile of up to 120 microns. Medium grade JetBlast™ is used for cleaning mill scale and medium rust removal, creating a typical surface profile of 60 to 100 microns. Fine grade JetBlast™ is used on new steel to remove mill scale and light rust resulting in a typical surface profile of 40 microns. For low-end applications, where blasting cost is a major factor, a general grade material is available.

JetBlast™ Abrasive Properties:

Shape	Sharp, Angular
Hardness (Moh Scale)	6 - 7
Bulk Density (kg/m³)	1900
Particle S.G.	3.4
Colour	Shiny Black
Size Standard	ASTM
Conductivity	< 25ms/m

Fe_2O_3 %	> 45	**Tin %**	0.08
SiO_2 %	> 31	**Antimony %**	0.07
Al_2O_3 %	> 4	**Chromium %**	0.02
Zn %	< 1	**Cobalt %**	0.02
CaO %	< 7	**Nickel %**	0.02
Cu %	< 1	**Cadmium %**	0.004
MgO %	> 1.5	**Arsenic**	Not Detected
TiO_2 %	< 2	**Beryllium**	Not Detected
Free Silica %	< 1	**Trace Elements %**	< 0.5
Lead %	0.1	**Moisture %**	< 1

JetBlast™ Available Sizes:

Grade	30/60	16/30	12/30	10/30	8/30	G. Grade
Microns	250 - 600	250 - 1180	600 - 1700	600 - 2000	600 - 2360	0 - 5000
Inch	0.009 - 0.023	0.009 - 0.046	0.023 - 0.060	0.023 - 0.078	0.023 - 0.092	0 - 0.195

JetBlast™ Packaging:

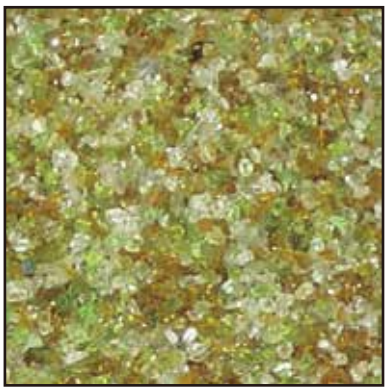
50kg Bags	2.0 Tonnes Pallet (40 Bags)
2.0 Tonnes Bulk Bag	1.5 Tonnes Pallet (30 Bags)
	1.0 Tonne Pallet (20 Bags)

JetBlast™ Ordering Information:

Stock Code	**ACS**-XXXX-YY-ZZ
Key	XXXX - Product Grade (e.g. 8/30, XXXX = 0830) YY - Product Weight (e.g. 2T, YY = 20) YY - 00 when packing in Bulk or Loose Bags ZZ - Packing AO for Bulk BA for Loose Bags CP for Bulk Bag CX for Jungle Box DA for Shrink Wrap

EnviroGlass™ Crushed Glass

Product Description and Technical Data:



EnviroGlass™ Angular blast media is manufactured from 100% recycled bottle and plate glass material and will produce an excellent finish and profile leaving the surface contamination free.

A low cost expendable blast cleaning media containing neither free silica nor heavy metals, EnviroGlass™ does not pose health hazards such as could be created by silica sand or slag media.

The sharp cutting angular edges provide a fast cleaning action at lower pressures producing an excellent surface profile preparation and yet is environmentally safe and user friendly.

Available in two different mesh grade sizes, EnviroGlass™ is one of the most economical expendable abrasives for cleaning surfaces where recovery and reuse is not practical or possible.

EnviroGlass™ is processed under stringent quality control procedures to ensure the size and distribution of particles in the abrasive mix is maintained at the correct proportion. This ensures an accurate, consistent surface profile is maintained.

EnviroGlass™ Abrasive Properties:

Shape	Angular
Hardness (Moh Scale)	6
Bulk Density (kg/m³)	1300
Particle S.G.	2.5
Colour	Mixed
Conductivity (gm/cc)	2.46 - 2.49
PH (TLCP)	8.50

EnviroGlass™ Typical Chemical Composition:

$Na_2O + K_2O + Li_2O$ %	12 - 15
CaO + MgO %	10 - 13
Al_2O_3 %	1 - 2
Other Oxides (Except SiO_2) %	0 - 1
SiO_2 (bound) %	Balance
Contains no free Silica	

Not classified as Hazardous according to criteria of WorkSafe Australia.

EnviroGlass™ Available Sizes:

Grade	**1.5**	**0.850**
Microns	1500 - 850	850 - 300
Inch	0.060 - 0.033	0.033 - 0.012

Other sizes available upon request

EnviroGlass™ Packaging:

1.5 Tonnes Bulk Bags

EnviroGlass™ Ordering Information:

Stock Code	**AOT-GC**XXX-YYYY
Key	XXX - Product Size (e.g. 085 for 0.85mm) YYYY - Packing B15T for 1.5 Tonnes Bulk Bags

WireBlast™ Cut Wire

Product Description and Technical Data:

WireBlast™ is a popular alternative to cast steel abrasives and finds specific niche markets where cast materials do not offer adequate performance. This is particularly true for peening applications where a higher level of abrasive hardness is desirable or when components to be peened have a high level of inherent hardness.

In order to produce repeatable peening results, the ideal peening media should contain particles of identical size, shape, hardness and density.

WireBlast™ is manufactured from wire strand, cut to lengths equal to its diameter. This results in particles virtually identical in size, shape, hardness and density and thus a media ideally suited for peening purposes.

WireBlast™ Cut Wires are supplied in three (3) forms depending on the requirements of the application. 1. As Cut (cylindrical with sharp edges), 2. Partially Conditioned (corners rounded off) and 3. Fully Conditioned (spherical). During use WireBlast™ Stainless Steel will work harden the more it is used, leading to an extremely long abrasive life span.

The close size range of the WireBlast™ particles ensures consistent results are achieved when used for surface finishing and treatment of metallic materials.

WireBlast™ Carbon Steel is very versatile and durable when compared to cast steel abrasives, due to virtually no internal flaws, i.e. porosity, shrinkage, cracks etc. Its higher density also offers a higher blast impact when compared with cast steel abrasives.

WireBlast™ Stainless Steel finds applications in cleaning, polishing stainless steel rods, pipes, plates and nonferrous die-cast castings (such as aluminium and magnesium). It is also used for cleaning magnetic parts when ferrous residues cannot be tolerated.

WireBlast™ Aluminium and Zinc are predominantly used for sand, stain and burr removal and to produce a glossy finish on components. It is also used in wheel blast applications where a 'soft impact' is desired during the blasting process.

WireBlast™ Abrasive Properties:

	Aluminium 1070	Carbon Steel	Stainless Steel SUS 304	Stainless Steel SUS 430	Zinc
Hardness (HV)	40 - 60	400 - 500	400 - 600	300 - 450	35 - 55
Density (g/cc)	2.7	7.6	7.6	7.6	7.1
Bulk Density (kg/l)	1.5	4.4	4.4	4.4	4.1
Ferrous / Non Ferrous	NF	F	F	F	NF
C %	/	0.4 - 0.7	< 0.08	< 0.12	/
Si %	< 0.2	0.15 - 0.35	< 1	< 0.75	/
Mn %	< 0.03	0.6 - 0.9	< 2	< 1	/
P %	/	< 0.04	< 0.045	< 0.04	/
S %	/	< 0.04	< 0.03	< 0.03	/
Ni %	/	/	8 - 10.5	N/A	/
Cr %	/	/	18 - 20	16 - 18	/
Cu %	< 0.04	/	/	/	/
Fe %	< 0.25	/	/	/	< 0.005
Mg %	/	/	/	/	/
Zn %	< 0.04	/	/	/	> 99.99
Pb %	/	/	/	/	< 0.007
Cd %	/	/	/	/	< 0.004

WireBlast™ Available Sizes:

Grade	**0.3**	**0.4**	**0.5**	**0.6**	**0.7**	**0.8**	**1.0**	**1.2**	**1.5**	**1.7**	**2.0**	**2.3**	**2.5**
Microns	300	400	500	600	700	800	1000	1200	1500	1700	2000	2300	2500
Inch	0.011	0.015	0.019	0.023	0.027	0.031	0.039	0.047	0.059	0.066	0.078	0.090	0.098
A1070				√		√	√	√	√	√	√	√	√
Steel	√	√	√	√	√	√	√	√	√	√	√	√	√
SS304	√	√	√	√	√	√	√	√	√	√	√	√	√
SS430		√	√	√		√	√	√	√	√	√	√	
Zn									√	√	√		

Other sizes and AMS specification available upon request

WireBlast™ Packaging:

25kg Bags in Drum

WireBlast™ Ordering Information:

Stock Code	**AOT-CW**XXXX-YYZZ
Key	XXXX - Product Material A1070 for Aluminium 1070 C62B, C72A or C82B for Carbon Steel SS304 for Stainless Steel 304 SS430 for Stainless Steel 430 ZN for Zinc YY - Product Size (e.g. 0.6mm, YY = 06) ZZ - Conditioned Form G1 for As Cut G2 for Semi Rounded & Conditioned G3 for Fully Rounded & Conditioned

DeFlash Media

Product Description and Technical Data:

DeFlash Media is an abrasive originally designed for use in the semiconductor manufacturing industry for deflashing IC leadframes.

Due to low production rates or warpage problems caused by using glass beads and soft abrasives, DeFlash Media was developed as an alternative.

The abrasive is a mixture of both QuickCut™ Aluminium Oxide and BrightBlast™ Glass Beads. This combination allows IC leadframes to be deflashed providing a smooth surface finish, as achievable with glass beads, but at a higher production rate.

The angular QuickCut™ also aids in the removal of tightly adhered flash, that would not normally be removed by glass beads alone.

By altering the proportion of each abrasive type, DeFlash Media can be fine tuned to suit individual requirements depending on the application.

Due to the versatility of the proportions of QuickCut™ Aluminium Oxide and BrightBlast™ Glass Beads in the abrasive mix, DeFlash Media may also be used for deflashing or surface finishing a variety of components where the use of the individual abrasive does not achieve the desired result or finish.

In order to ensure consistency within individual batches, DeFlash Media is produced by a vibratory mixing process to provide thorough mixing and even particle distribution. DeFlash Media is widely used in, and suitable for both dry and wet deflashing/blasting processes.

DeFlash Abrasive Properties:

QuickCut™ Aluminium Oxide	
Shape	Angular
Hardness (HRC min)	9
Bulk Density (kg/m³)	2400
Particle S.G.	3.9 - 3.94
Colour	Brown
Al_2O_3	> 94.0 %
Fe_2O_3	< 0.16 %
TiO_2	< 3.6 %
SiO_2	< 1.3 %
CaO	0.5 %
Na_2O	N/A

BrightBlast™ Glass Beads	
Shape	Spherical
Hardness (HRC min)	5.5
Bulk Density (kg/m³)	1500
Particle S.G.	2.45 - 2.5
Colour	Clear
Free Silica %	0

DeFlash Available Sizes:

Grade	**31 - IC**		**41 - IC**	
Component	**QuickCut™ #120**	**BrightBlast™ GB10**	**QuickCut™ #120**	**BrightBlast™ GB10**
Microns	125	90 - 150	125	90 - 150
Inch	0.004	0.003 - 0.006	0.004	0.003 - 0.006

DeFlash Packaging:

25kg Bags	1 Tonne Pallet (40 x 25kg Bags)

DeFlash Ordering Information:

Stock Code	**AOT-OADM**XX
Key	XX - Product Grade (e.g. 31 for 31- IC)

EnviroGrit™ Garnet

Product Description and Technical Data:

EnviroGrit™ Garnet is derived from mined Almandine mineral deposits. Almandine is the heaviest and hardest of all the garnet types in the garnet family group, resulting in an ideal abrasive grain for blasting applications.

Once extracted, the raw material is processed to remove chlorides and sulphates, magnetically screened to remove ferrous particulate and finally screened to the desired size range.

Being an inert, non-toxic mineral, containing less than 0.1% free silica, EnviroGrit™ is an environmentally safe, user friendly alternative to silica sand and other expendable abrasive.

EnviroGrit™ Garnet particles are sub-angular in shape resulting in extremely fast cutting rates and low abrasive consumption. The high specific gravity of the abrasive grains and the low breakdown rate, results in significantly reduced dust levels, thus ensuring good operator visibility and less risk to personnel or environmental contamination in surrounding areas. The low consumption rate and the recyclability, up to 5 times, also ensures the volume of waste generated for disposal is minimised.Being a naturally occurring mineral EnviroGrit™ is also a non-pollutant to the environment.

Blast cleaning production rates using EnviroGrit™ are greatly increased when compared to other expendable abrasives. This factor, along with the reduced amount of abrasive consumed can lead to significant cost savings per square meter blasted and often results in EnviroGrit™ Garnet being the most cost effective abrasive available for the blasting project.

EnviroGrit™ is processed under stringent quality control regulations to ensure the size and distribution of particles in the abrasive mix is maintained at the correct proportion. This ensures an accurate, consistent surface profile is maintained. A surface cleanliness of Class Sa3, even on heavily pitted and corroded steel, is easily achievable with EnviroGrit™, and abrasive embedment into the surface is minimal.

Containing minimal ferrous particles EnviroGrit™ can be utilised to blast corrosion resistant steels and non-ferrous products without the risk of ferrous contamination to the surface.

EnviroGrit™ is also utilised as a cutting media in water jet cutting and as a filtration media.

EnviroGrit™ Abrasive Properties:

Shape	Angular Free - flowing Grit
Hardness (Moh Scale)	7.5 - 8.0
Bulk Density (kg/m³)	2400
Particle S.G.	4.1
Colour	Dark Pink
Conductivity (ms/m)	< 25
Radioactivity (Limit 10Bq/kg)	Undetected
Size Standard	ASTM

Typical Chemical Composition	
Almandine Garnet %	97 - 98
Ilmenite %	1- 2
Quartz %	< 0.5
Zircon %	< 0.2

EnviroGrit™ Available Sizes:

Grade	**BR1**	**CB1**	**CB2**	**SB1**	**PB1**	**PF1**	**PF2**	**PF3**
Microns	150	180	250	200 - 500	250 - 600	425 - 850	850 - 1180	850 - 2000
Inch	0.006	0.007	0.009	0.008 - 0.020	0.009 - 0.023	0.016 - 0.033	0.033 - 0.046	0.033 - 0.078

Other sizes available upon request

EnviroGrit™ Packaging:

25kg Bags, 1 Tonne Bulk Bag (40 x 25kg Bags)	2 Tonne Bulk Bag
	1 Tonne Bulk Bag

EnviroGrit™ Ordering Information:

Stock Code	**AGG-GN**XXX-YYY
Key	XXX - Code for Garnet Grade YYY - Packing Blank for 25kg Bags B1T for 1 mt Bulk Bag B2T for 2 mt Bulk Bag

ProFinish™ Olivene

Product Description and Technical Data:

ProFinish™ Olivene is non-hazardous, non-toxic and chemically inert; so it is safe for open blasting use, and for use around water. Being virtually silica free (less than 1%) and heavy metals free, it is an environmentally safe alternative to silica sand and other expendable abrasives such as slags.

Olivene rock deposits are usually harder than surrounding rock and stands out as distinct ridges in the terrain. These ridges are often dry with little soil. Such deposits are mined, and materials subsequently crushed, screened and further processed to produce ProFinish™ Olivene. The sub-angular shape enables rapid cleaning and low abrasive consumption. It offers an excellent cost/performance ratio especially when used in conjunction with an abrasive recycling system, as the material can be recycled 3-4 times prior to disposal.

ProFinish™ Olivene is available in several sizes to suit a myriad of blasting applications. Ultra-fine sizes may be used for non-ferrous blasting or ferrous applications requiring a lower surface profile. Larger grain sizes may be used with new steel to produce 76-102 microns profile, and up to 102-127 microns profile for heavily painted or rusted steel with deep cavities.

The abrasive material is classified as SSPC Grade 4 for surface profile (76 to 127 microns) and Class A for crystalline silica content (less than 1.0%). It also meets US NAVY requirements for ship hull blast cleaning under MIL-A-22262b (SH) and low dust emission requirements of California Air Resource Board (California Code of Regulation, Title 17, Section 92530).

ProFinish™ Abrasive Properties:

Shape	Angular Free-Flowing Grit
Hardness (Moh Scale)	7.0 - 7.5
Bulk Density (kg/m³)	1250 - 1314
Particle S.G.	2.72 - 2.94
Colour	Brown
Conductivity (ms/m)	< 25
Chloride	0.016%
TENORM (< 1Bq/g)	0.0666
Radioactivity (< 0.25 uSv/hr)	Undetected
Size Standard	ASTM

ProFinish™ Typical Chemical Composition

Magnesium Oxide MgO %	38 - 42
Silicon Dioxide SiO_2 (*) %	39 - 47
Iron Oxide Fe_2O_3 %	7 - 10
Aluminium Oxide Al_2O_3 %	0.3 – 1.3
Calcium Oxide CaO %	0.8 – 1.0
Others	1 - 2
(*) In silicate form with less than 1% free silica	

ProFinish™ Available Sizes:

Grade	PA1	PA2	PA2.5	PA3
Microns	1000 -3000	400-1200	300-1000	200-500
Inch	0.039 – 0.118	0.016 – 0.047	0.012 – 0.039	0.008 – 0.020

ProFinish™ Packaging:

25kg Bags or 1360kg Bulk Bags	1.4 Tonnes Pallet (56 x 25kg Bags), Bulk Bag

ProFinish™ Ordering Information:

Stock Code	AOT-PROXXX-YY
Key	XXX – Code for Olivene Grade YY – Packing BA for Loose 25kg Bags CP for 1360kg Bulk Bags Blank for 1.4 Tonnes Pallet (56 x 25kg Bags)

BrightBlast™ Glass Beads

Product Description and Technical Data:

BrightBlast™ Glass Beads are unique and popular air blasting media widely used for cleaning, conditioning or peening metallic surfaces.

BrightBlast™ is manufactured from high-grade crushed and sized glass cullet. The cullet is melted to a spherical shape and annealed to equalise internal stresses and resist fracture. These non-abrasive, clear, transparent spheres function without particle embedment, pick-up, contamination or other damage to the surface under treatment.

Depending on the size and operating parameters selected, BrightBlast™ produces a surface finish ranging from fine matte to bright satin. Decorative and special effects on surfaces may easily be achieved by masking and blasting surfaces with BrightBlast™.

The inherent characteristics of BrightBlast™ Glass Beads permit cleaning and deburring of critically toleranced parts without removing any base metal, thereby preserving the critical tolerances. In addition, the inherent strength of glass beads is such that it can survive multiple impacts, making it an ideal abrasive for use in blasting equipment fitted with recycling facilities.

BrightBlast™ Glass Beads are widely utilised in peening applications to impart a layer of compressive stresses on components exposed to cyclical loadings and containing residual tensile stresses.

The use of BrightBlast™, to peen the component, reduces the risk of failure due to fatigue stress or stress corrosion cracking. Being chemically inert and non-toxic, BrightBlast™ will not leave any undesirable or ferrous residue on blasted surfaces and uncontaminated spent media is environmentally harmless.

BrightBlast™ Abrasive Properties:

Shape	Spherical	**Basic Material**	Soda Lime Glass
Hardness (Moh)	5.5	**Roundness %**	Min 70
Bulk Density (kg/m³)	1500	**Broken Particles %**	Max 3 by count
Particle S.G.	2.45 - 2.50	**Free Silica %**	0
Colour	Clear Glass	**Size Standard**	ASTM

BrightBlast™ Available Sizes:

Grade	GB3	GB4	GB5	GB6	GB7	GB8	GB9	GB10	GB11	GB12	GB13
Code	03B	04C	05AA	06D	07AB	08AC	09AD	10AE	11AG	12AH	13AI
Microns	425 - 600	250 - 425	212 - 425	212 - 300	180 - 300	125 - 250	106 - 212	90 - 150	53 - 106	45 - 90	< 53
Inch	.016 - .023	.009 - .016	.008 - .016	.008 - .011	.007 - .011	.005 - .010	.004 - .008	.003 - .006	.002 - .004	.001 - .003	< .002

Designation Number / Grade	AGB-70 (MIL-3)	AGB-50 (MIL-4)	AGB-35 (MIL-5)	AGB-30	AGB-25 (MIL-6)	AGB-20 (MIL-7)	AGB-18 (MIL-8)	AGB-15 (MIL-9)	AGB-12 (MIL-10)	AGB-10 (MIL-11)	AGB-9 (MIL-12)	AGB-6 (MIL-13)
Microns	850 - 600	600 - 425	425 - 300	355 - 250	300 - 212	250 - 180	212 - 150	180 - 125	150 - 90	125 - 75	106 - 63	90 - 45
Inch	.033 - .023	.023 - .016	.016 - .012	.014 - .010	.012 - .008	.010 - .007	.008 - .006	.007 - .005	.006 - .0035	.005 - .003	.004 - .002	.0035 - .001

Other sizes peening grades available upon request.

BrightBlast™ Packaging:

25kg Bags	1 Tonne Pallet (40 x 25kg Bags)

BrightBlast™ Ordering Information:

Stock Code	**AGB**-MILXX
Key	XX - Product MIL Grade (e.g. 13 for MIL13)
Stock Code	**AGB-AMS2431AGBXX**
Key	XX - Product AMS 2431 Designation Number (e.g. 30 for AGB30)
Stock Code	**AGB**-XXXX
Key	XXXX - Code for Product GB Grade

PanaCut™ Granite Cutting Grit

Product Description and Technical Data:

PanaCut™ is a steel abrasive produced specifically to meet the requirements of stone cutting facilities utilising gang saws for the cutting of granite blocks into slabs. The abrasive is suspended in a slurry and is continuously fed between traversing saw blades and the granite block, thus abrading away the granite. The arduous requirements of this application render standard steel grit and chilled iron grit unsuitable for the application.

PanaCut™ is manufactured from cast steel shots crushed to granular grit form and subsequently tempered to a hardness unique to granite cutting applications. PanaCut™ is produced under a controlled manufacturing process to achieve a product of uniform hardness, density and microstructure; coupled with good toughness for durability. These unique characteristics provide superior blade down speeds and decreased abrasive consumption without affecting cut slab finish or quality.

PanaCut™ is available in all size ranges conforming to SAE and JIS specifications. Standard grade materials are formulated to meet the general requirements of a typical operation cutting a wide variety of blocks.

Customised special cutting grades (with unique hardness and/or size specifications and/or mixed with shots) are also available upon request.

Our customisation program allows our customers to have the best product for their process as each stone cutting factory has its own unique characteristics depending on the gang saw equipment, cutting speed and pressure, mix of granite blocks being cut etc.

PanaCut™ Abrasive Properties:

Hardness (HRC)	63 - 67	**Micro Structure**	> 85% Martensite
Shape	Angular	**Total Carbon %**	0.8 - 1.2
Bulk Density (kg/m³)	3700	**Silicon %**	0.4 - 1.2
Particle S.G.	7.6	**Manganese %**	0.5 - 1.2
Colour	Silvery Grey	**Sulphur %**	< 0.05
Size Standard	SAE and JIS	**Phosphorus %**	< 0.05

PanaCut™ Available Sizes:

Grade	PC - 12H	PC - 11H	PC - 10H	PC - 7H	PC - 4H
Grade	**PC - 12HS**	**PC - 11HS**	**PC - 10HS**	**PC - 7HS**	**PC - 4HS**
Microns	710 - 1400	710 - 1400	425 - 1180	300 - 1000	180 - 710
Inch	0.027 - 0.055	0.027 - 0.055	0.016 - 0.046	0.011 - 0.039	0.007 - 0.027

Other sizes available upon request
PC-H designates grit only. PC-HS designates grit with shot addition, 2-15% depending on requirements.

PanaCut™ Packaging:

25kg Bags or Drums of 750kg/800kg	1 Tonne Pallet (40 x 25kg Bags) or Drums

PanaCut™ Ordering Information:

Stock Code	**ASA-STCPC**-XXX or XXXX
Key	XXX - Product Grade (e.g. 04H for PC-4H) XXXX - Product Grade (e.g. 12HS for PC-12HS)

Product Description and Technical Data:

MillRite™ is used for dispersion, microcrushing and mixing of dyes, pigment, paint and magnetic materials.

The product has a high degree of roundness - greater than 85% and finds extensive applications in the manufacturing process of dyes and paints, powdered chemical blending and manufacture, selected food industries, architectural or decorative usage, etc...

MillRite™ has a high compressive strength, making it suitable for mixing of magnetic materials in ball mills and is used extensively in the resin manufacturing industries for blending of resins, pigments, etc...

It also is used for fiber filtration and chemical waste fluid filtration.

MillRite™ is chemically inert but may react to highly concentrated hydrofluoric and sulfuric acids.

MillRite™ Abrasive Properties:

Shape	**Powder**
Hardness (Moh Scale)	**> 6.0**
Refractive Index	**> 1.5**
Particle S.G.	**2.5**
Colour	**White**
Compressive Strength (kg/mm^2)	**58**

Typical Chemical Composition	
SiO_2 %	**> 70**
CaO %	**7 - 12**
MgO %	**1.0 - 4.5**
Al_2O_3 %	**0.8 - 1.0**
R2O %	**13 - 15**
Magnetic Particles %	**< 0.1**
Roundness %	**> 85**

MillRite™ Available Sizes:

Grade	JM-20	JM-30	JM-40	JM-50	JM-60	JM-70	JM-80
Size (mm)	0.85 - 1.18	1.00 - 1.40	1.40 - 2.00	1.70 - 2.40	2.00 - 3.00	2.40 - 3.40	3.00 - 4.00
Size (Mesh)	20 - 14	16 - 12	12 - 9	10 - 8	9 - 7	8 - 6	6 - 4

MillRite™ Packaging:

25kg Bags	1 Tonne Pallet (40 x 25kg Bags)

MillRite™ Ordering Information:

Stock Code	AGB-JMXX
Key	XX - Product Grade （e.g.XX = 20 for JM-20）

LiteBlast™ Plastic Media

Product Description and Technical Data:

LiteBlast™ Plastic Media is a manufactured abrasive utilised in applications requiring a controlled, gentle, non-abrading action, where damage or etching to the underlying substrate cannot be tolerated. The low hardness and specific gravity of LiteBlast™ Plastic Media allows it to be used in the most sensitive of applications. Available in 6 types of plastic stock, each one with its own differing characteristics, the most suitable LiteBlast™ Plastic Media can be selected for any given application.

LiteBlast™ Plastic Media is suitable for use in both wet and dry compressed air blasting equipment and may be used effectively at extremely low blasting pressures, to ensure no damage to the component being blasted. When used in dry compressed air blasting equipment LiteBlast™ Plastic Media is pre treated with an anti-static agent to prevent adhesion to the component and thus abrasive wastage. The high durability and irregular particle shape of LiteBlast™ ensures maximum productivity and abrasive life is achieved when utilised in equipment incorporating recycling and re-classification components.

LiteBlast™ Plastic Media is commonly used in applications where the traditional method of component cleaning is to utilise solvents and chemicals. With the inherent health risks, waste water treatment costs and environmental concerns associated with chemicals and solvents, LiteBlast™ Plastic Media offers a safe, economical and environmentally friendly alternative. No free silica is present in LiteBlast™. The use of chemicals is also non-discriminatory, due to the product being immersed. This can lead to damage or stock removal from the base material. Utilising LiteBlast™ this problem is eliminated as the abrasive is only directed at the waste product that is required to be removed.

LiteBlast™ Abrasive Properties:

Type	I	II	III	V	VI	X	A	L
Colour	Mixed	Mixed	Mixed	Mixed	Grey	Mixed	Mixed	Mixed
Hardness (Moh)	3.0	3.5	4.0	3.5	3.0	3.2	4.0	3.5
Bulk Density (kg/m^3)	642 - 802	930 - 962	930 - 962	642 - 802	642 - 802	642 - 802	642 - 802	642 - 802
Particle S.G.	1.15 - 1.25	1.47 - 1.52	1.47 - 1.52	1.1 - 1.2	1.28 - 1.33	1.1 - 1.2	1.47 - 1.52	1.1 - 1.2
Material	Polyester	Urea Formalde-hyde	Melamine Formalde-hyde	Acrylic	Poly Carbonate	Themoset Acrylic	Melamine Formalde-hyde	Acrylic
Size Standard	ASTM and MIL-P-85891A							

LiteBlast™ Available Sizes:

Grade	8/16	12/20	16/20	16/30	20/30	20/40
Microns	1180 - 2360	850 - 1700	850 - 1180	600 - 1180	600 - 850	425 - 850
Inch	0.046 - 0.092	0.033 - 0.067	0.033 - 0.046	0.023 - 0.046	0.023 - 0.033	0.016 - 0.033

Grade	30/40	40/60	60/80	60/100	70/100	100/270
Microns	425 - 600	250 - 425	180 - 250	150 - 250	150 - 212	53 - 150
Inch	0.016 - 0.023	0.009 - 0.016	0.007 - 0.009	0.006 - 0.009	0.006 - 0.008	0.002 - 0.006

Other sizes available upon request

LiteBlast™ Packaging:

20kg Bags or Carton Boxes	125kg Fibre Drum

LiteBlast™ Ordering Information:

Stock Code	**ALB**-XYY-ZZW
Key	X - Product Type (I, II, III, V, VI, X, L, A) YY - Upper Mesh Size (e.g. 16 for Mesh 16/20) ZZ - Lower Mesh Size (e.g. 20 for Mesh 16/20) W - Product Grade C for Commercial Grade E for Electronic Grade P for Special P Grade W for W/O Antistatic

LiteBlast™ Plastic Media PA, PB & PC

Product Description and Technical Data:

LiteBlast™ PA is a cubic shaped plastic media, which can be used for both normal and cryogenic applications.

LiteBlast™ PA is extensively used for mould cleaning, deflashing thermoset plastics and aesthetic parts. It is also used in aeronautical industries for cleaning intricate and dimension sensitive components.

LiteBlast™ PB is the smallest sized non-abrasive plastic blasting media available. LiteBlast™ PB is ideally suited for deflashing delicate and complicated shaped moulded rubber and plastic components. LiteBlast™ PB is non-toxic and it doesn't leave any post blast residue.

LiteBlast™ PC is a special purpose cryogenic blasting media stable even at very low temperatures. LiteBlast™ PC is extensively used in high speed wheel blast machines for deflashing rubber components like o-rings, bushing, oil seals, gaskets, syringe stoppers, spark plug boots etc.

LiteBlast™ PC is long lasting, non toxic and non-damaging to both the part that is being deflashed and the blasting equipment. It is also very widely used for deflashing thermoset plastic parts and machined intricate diecast components.

LiteBlast™ Abrasive Properties:

Type	PA	PB	PC
Chemical Material	Polyamide / Nylon	Polystyrene	Polycarbonate
Unique Property	Stable at Cryogenic Temperatures and Non Abrasive	Non Abrasive	High Density and Stable at Cryogenic Temperatures
Media Form / Shape	Cubical	Spherical	Cylindrical

LiteBlast™ Available Sizes:

Grade	PA 20	PA 30	PA 40	PA 60	PA 70
Microns	500 x 500 x 500	750 x 750 x 750	1000 x 1000 x 1000	1500 x 1500 x 1500	1780 x 1780 x 1780
Inch	0.20 x .020 x .020	.030 x .030 x .030	.039 x .039 x .039	.059 x .059 x .059	.070 x .070 x .070
Diagonal In Microns	870	1320	1750	2640	3070

Grade	PB 1	PB 2	PB 3
Microns	610 - 990	360 - 610	150 - 360
Inch	.024 - .039	.014 - .024	.006 - .014

Grade	PC 20	PC 30	PC 45	PC 60	PC 70	PC 80
Microns	500 x 500	750 x 750	1140 x 1140	1500 x 1500	1780 x 1780	2000 x 2000
Inch	.020 x .020	.030 x .030	.045 x .045	.059 x .059	.070 x .070	.079 x .079

LiteBlast™ Packaging:

25kg Bags / Boxes

LiteBlast™ Ordering Information:

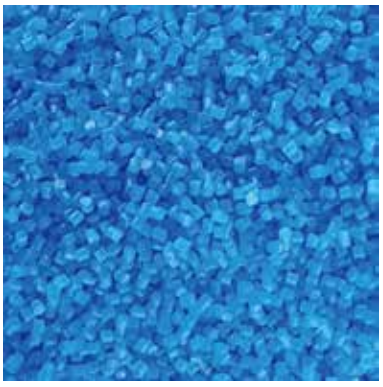
Stock Code (Type PA)	**ALB-PA-**XX
Key	XX - Product Grade (e.g. 20 for PA 20)
Stock Code (Type PB)	**ALB-PB-**X
Key	X - Product Grade (e.g. 1 for PB 1)
Stock Code (Type PC)	**ALB-PC-**XX
Key	XX - Product Grade (e.g. 20 for PC 20)

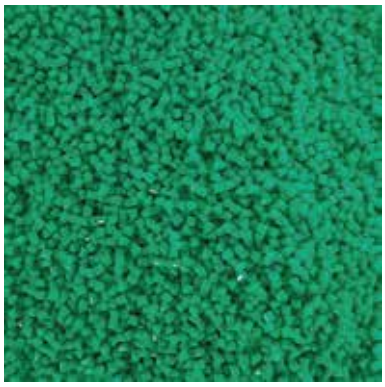
LiteBlast™ Plastic Media KA & KG

Product Description and Technical Data:

LiteBlast™ KA is a thermoset die cast cubical or cylindrical shaped plastic media, which feature extended life and no dust and toxicity during use. It is used extensively for mould cleaning, de-flashing and de-burring of engineering thermoset plastics and aesthetic parts. It is also used in aeronautical industries for cleaning intricate and dimension sensitive components.

LiteBlast™ KG is a special purpose die cast cylindrical shaped cryogenic blasting plastic media which remain stable even at very low temperatures. LiteBlast™ KG is extensively used in high speed wheel blast machines for de-flashing and de-burring of rubber components such as O-rings, bushing, oil seals, gaskets, syringe stoppers, spark plug boots etc... and soft plastic parts.



LiteBlast™ Abrasive Properties

Type	KA	KG
Hardness (HRr)	110	120
Density (g/m³)	1.13	1.19
Chemical Material	Polyamide / Nylon	Polyamide / Nylon
Unique Property	Non Abrasive	Stable at Cryogenic Temperatures and Non Abrasive
Media Form/Shape	Cubical / Cylindrical	Cylindrical

LiteBlast™ Available Sizes:

Grade	KA 025	KA 030	KA 040	KA 050
Shape	Cylindrical	Cylindrical	Cylindrical	Cylindrical
Dimensions (mm)	0.25 (L) x 0.25 (Φ)	0.3 (L) x 0.3 (Φ)	0.4 (L) x 0.4 (Φ)	0.5 (L) x 0.5 (Φ)

Grade	KA 075	KA 100	KA 120	KA 150	KA 200
Shape	Cubical	Cubical	Cubical	Cubical	Cubical
Dimensions (mm)	0.75x0.75x0.75	1.0x1.0x1.0	1.2x1.2x1.2	1.5x1.5x1.5	2.0x2.0x2.0

Grade	KG 040	KG 050	KG 075
Shape	Cylindrical	Cylindrical	Cylindrical
Dimensions (mm)	0.4 (L) x 0.4 (Φ)	0.5 (L) x 0.5 (Φ)	0.75 (L) x 0.75 (Φ)

Grade	KG 100	KG 114	KG 120	KG 150
Shape	Cylindrical	Cylindrical	Cylindrical	Cylindrical
Dimensions (mm)	1.0 (L) x 1.0 (Φ)	1.14 (L) x 1.14 (Φ)	1.2 (L) x 1.2 (Φ)	1.5 (L) x 1.5 (Φ)

LiteBlast™ Packaging

25kg Bags / Boxes	

LiteBlast™ Ordering Information

Stock Code (Type KA)	ALB-KA-XXX
Key	XXX – Product Grade (e.g. 050 for KA 050)
Stock Code (Type KG)	ALB-KG-XXX
Key	XXX – Product Grade (e.g. 114 for KG 114)

PaintMix™ Line Marking Beads

Product Description and Technical Data:

PaintMix™ is used for road marking and striping highways and runways the world over. Its usage results in much better visibility of the traffic markings and road signs leading to safer night driving conditions.

Beads with higher refractive index are used for road safety signs.

PaintMix™ is available in three types - Drop On (Type D), Intermix (Type N) and Premix (Type P). PaintMix™ Type P and N beads are mixed with the paint prior to the striping of the roads.

As the paint layers wear, the beads are exposed, giving enhanced visibility to road markings. PaintMix™ Type D beads are dropped on the freshly striped paint surfaces on the roads to give immediate enhanced visibility to night drivers. Normally all the three PaintMix™ Type N, D and P beads are used in conjunction with each other.

PaintMix™ Type D beads are available in three versions - normal, moisture-proof and flotation types.

PaintMix™ Abrasive Properties:

Roundness	> 80 %	**SiO_2 %**	> 70
Hardness (Moh Scale)	5.5 - 6.0	**CaO + MgO %**	> 8
Bulk Density (kg/m³)	1600	**$Na_2O + K_2O + Al_2O_3 + Fe_2O_3$%**	< 18
Particle S.G.	2.5	**Quartz (Free Silica) %**	< 0.5
Hue / Tint	Clear	**Magnetic Particles %**	< 0.1
		Size Standard	ASTM

Refractive Index	
Normal	> 1.5
Runways / Highway Signs	> 1.9

PaintMix™ Available Sizes:

Grade	Type D	Type N	Type P
Microns	150 - 600	425 - 1180	75 - 150
Inch	0.006 - 0.023	0.017 - 0.047	0.003 - 0.006

PaintMix™ Packaging:

25kg Bags	1 Tonne Pallet (40 x 25kg Bags)

PaintMix™ Ordering Information:

Stock Code (Type D)	**AGB-T1503**
Stock Code (Type N)	**AGB-INTERMIX**
Stock Code (Type P)	**AGB-PREMIX**

Silica Sand

Product Description and Technical Data:

Silica Sand is an economical granular abrasive product. It has many viable applications including use as a water filtration media, as an antiskid compound mix, as a plastering compound mix and also occasionally for water jet blasting.

Due to its low cost, some people use silica sand for abrasive blasting (hence the original term sand blasting). However, use of silica sand for abrasives blasting poses severe and often fatal, long term operator health risks, even with the use of operator safety equipment.

Pan Abrasives does not recommend the use of silica sand for any abrasive blasting applications.

All data provided herein is for information/comparison purposes only.

Silica Sand Abrasive Properties:

Colour	Brown to Off-White	Typical Chemical Composition	
Bulk Density (kg/m³)	Approx. 1500	**SiO_2** %	> 98
Particle S.G.	2.65	**Fe_2O_3** %	Max. 0.08
Hardness (Moh Scale)	5.0 - 6.0	**Al_2O_3** %	Max. 0.8

Silica Sand Available Sizes:

Grade	**10/20**	**20/40**	**20/80**	**40/80**
Microns	850 - 1000	450 - 850	180 - 850	180 - 450

Other sizes available upon request

Silica Sand Packaging:

50kg Bags	1 Tonne Bulk Bags

Silica Sand Ordering Information:

Stock Code	**AOT-OASS**XX-YY
Key	XX - Upper Mesh Size (e.g. XX = 10 for Mesh 10/20) YY - Lower Mesh Size (e.g. YY = 20 for Mesh 10/20)

HardCut™ Silicon Carbide

Product Description and Technical Data:

HardCut™ Silicon Carbide is an extremely hard, sharp and aggressive abrasive. It is formed inside electric furnaces, at a temperature of 2200°C and produced from quartz and petroleum coke. It is chemically stable, has high resistance to oxidation and is also unaffected by acids and will only react to alkali at very high temperatures. As an abrasive, it is surpassed in hardness only by diamond, cubic boron nitride and boron carbide.

Being so hard HardCut™ is extremely fast cutting and can be used to clean and etch very hard surfaces that would otherwise not be possible with any other softer abrasives. Products manufactured from Tungsten Carbide may also be cleaned with HardCut™.

HardCut™ is harder and sharper than Aluminium Oxide but is more friable, therefore prone to breaking down at a faster rate.

HardCut™ is available in 2 types，HardCut™ Type G and HardCut™ Type B.

Type G is the purest form of commercially available Silicon Carbide. It is used in many applications ranging from blast cleaning and glass etching, manufacture of bonded and coated abrasives through to refractory and ceramic applications. It is most suited for surface finishing non-ferrous materials such as cemented carbides, optical glass and ceramics.

Type B is used for surface finishing applications requiring a fast cutting action without leaving any ferrous residue on the blast surface. It is also extensively used in the manufacture of coated and bonded abrasives (e.g. sand paper, grinding stones and wheels), in refractory products and for glass etching.

HardCut™ Abrasive Properties:

Shape	Angular	**Typical Chemical Composition**						
Hardness (Moh Scale)	9.15		**Type B**			**Type G**		
Bulk Density (kg/m³)	1760	**Grade**	**12 - 90**	**100 - 180**	**220 - 240**	**12 - 90**	**100 - 180**	**220 - 240**
Particle S.G.	3.2	**SiC %**	> 98.5	98	97	> 99	98.5	97.5
Colour	Type B - Crystalline Black Type G - Semi Transparent Dark Green	**FC %**	< 0.2	< 0.3	< 0.3	< 0.2	< 0.25	< 0.25
Size Standard	ASTM	**Fe_2O_3 %**	< 0.6	< 0.8	< 1.2	< 0.2	< 0.5	< 0.7

HardCut™ Available Sizes:

Grade	Microns	Inch	Grade	Microns	Inch	Grade	Microns	Inch	Grade	Microns	Inch
4	4750 - 5600	.187 - .220	**14**	1400 - 1700	.055 - .066	**40**	425 - 500	.016 - .019	**100**	125 - 150	.005 - .006
5	4000 - 4750	.157 - .187	**16**	1180 - 1400	.046 - .055	**46**	355 - 425	.013 - .016	**120**	106 - 125	.004 - .005
6	3350 - 4000	.131 - .157	**20**	1000 - 1180	.039 - .046	**54**	300 - 355	.011 - .013	**150**	75 - 106	.003 - .004
7	2800 - 3350	.110 - .131	**22**	850 - 1000	.033 - .039	**60**	250 - 300	.009 - .011	**180**	63 - 90	.0025 - .0035
8	2360 - 2800	.092 - .110	**24**	710 - 850	.027 - .033	**70**	212 - 250	.008 - .009	**220**	53 - 75	.002 - .003
10	2000 - 2360	.078 - .092	**30**	600 - 710	.023 - .027	**80**	180 - 212	.007 - .008	**240**	45 - 53	.001 - .002
12	1700 - 2000	.066 - .078	**36**	500 - 600	.019 - .023	**90**	150 - 180	.006 - .007			

Other sizes available upon request

HardCut™ Packaging:

25kg Bags	1 Tonne Pallet (40 x 25kg Bags)

HardCut™ Ordering Information:

Stock Code	**AOT-SC**XXX
Key	XXX - Mesh Size (e.g. XXX = 008 for Mesh 8)

CleanBlast™ Zinc Shot

Product Description and Technical Data:

CleanBlast™ Zinc Shot is a soft metallic abrasive, used primarily in the die-casting and gravity casting industries for the deburring and deflashing of aluminium and zinc alloy castings.

CleanBlast™ Zinc Shot is an ideal abrasive for blasting corrosion resistant steels and non-ferrous products, when the risk of ferrous contamination to the surface cannot be tolerated.

CleanBlast™ Zinc Shot is manufactured from virtually pure zinc. This enables it to be used in applications where there is a high risk of explosion if an aluminium shot were to be used. This is typically applicable when deflashing aluminium components with aluminium shot. The high volume of dust generated can lead to an explosive atmosphere. Aluminium shot is approximately 10 times more explosive than CleanBlast™ Zinc Shot, so the use of CleanBlast™ Zinc Shot greatly reduces the risk of explosion.

CleanBlast™ Zinc Shot is approximately 2.5 times denser than aluminium shot. This feature permits CleanBlast™ Zinc Shot to be used for deflashing or deburring components that would ordinarily not be deflashed or deburred adequately with aluminium shot. The high density of CleanBlast™ Zinc Shot enables it to remove burrs up to 40% in size of the shot's diameter.

CleanBlast™ Zinc Shot will remove burrs 0.5mm thick, whilst an equivalently sized aluminium shot will remove a burr only 0.3mm thick.

CleanBlast™ Abrasive Properties:

Shape	Spherical	**Size Standard**	ASTM
Hardness (HV)	35 - 55	**Zinc %**	> 99.0
Bulk Density (kg/m³)	4200	**Lead %**	< 0.007
Particle S.G.	7.1	**Iron %**	< 0.005
Colour	Grey	**Cadmium %**	< 0.004

CleanBlast™ Available Sizes:

Grade	AZ - 20	AZ - 15	AZ - 12	AZ - 10
Microns	1410 - 3360	1000 - 2000	710 - 1410	590 - 1000
Inch	0.055 - 0.130	0.039 - 0.078	0.028 - 0.055	0.02 - 0.039

Grade	AZ - 08	AZ - 06	AZ - 04
Microns	500 - 1000	350 - 840	297 - 710
Inch	0.019 - 0.039	0.013 - 0.033	0.011 - 0.028

Other sizes available upon request

CleanBlast™ Packaging:

20kg Bags	500kg Steel Drums (25 x 20kg Bags)

CleanBlast™ Ordering Information:

Stock Code	**AAL-0AZCS**XX
Key	XX - Product Grade (e.g. 06 for AZ - 06)

SatinBlast™ Stainless Steel Shot

Product Description and Technical Data:

SatinBlast™ Stainless Steel Shot is one of the longest lasting most durable abrasives available. Produced from 300 Series Cast Stainless Steel, SatinBlast™ will provide repeatable, consistent performance for thousands of cycles, a critical factor when using for shot peening purposes.

During use, and because of the continuous impacting, SatinBlast™ will work harden itself, its internal structure changing from austenitic to martensite. This transformation enables SatinBlast™ to withstand up to 5000 impacts.

As produced, SatinBlast™ has a hardness of approximately 200 HV. With continuous use the hardness will increase to approximately 530 HV after 2000 cycles. Due to its exceptionally low break down rate, virtually no dust is produced from the abrasive itself.

The high density of SatinBlast™, along with it not shattering on impact, also delivers very high impact energies to the work piece, resulting in faster cleaning rates.

SatinBlast™ is used for applications where residue on the blasted component is undesirable and/or when a very bright surface finish is required. The abrasive will leave no ferrous residue or staining on the work piece. SatinBlast™ is widely used on magnesium, aluminium, nickel and chromium based alloy components and other non-ferrous parts.

SatinBlast™ Abrasive Properties:

Shape	Round	**Size Standard**	ASTM
Hardness (HV) New / Unused	300	**Chromium %**	16 - 20
Hardness (HV) Approx. 2000 Cycles	450	**Nickel %**	12 - 14
Bulk Density (kg/m³)	4500	**Silicon %**	< 3
Particle S.G.	> 7.0	**Manganese %**	< 2
Colour	Silver Grey	**Carbon %**	< 0.25

SatinBlast™ Available Sizes:

Grade	S040	S070	S110	S170	S230
Microns	45 - 250	75 - 425	150 - 600	425 - 1000	600 - 1180
Inch	0.002 - 0.009	0.003 - 0.016	0.006 - 0.023	0.016 - 0.039	0.023 - 0.046
Grade	S280	S390	S460	S660	S780
Microns	710 - 1400	850 - 1700	850 - 2000	1180 - 2800	1700 - 4000
Inch	0.028 - 0.055	0.033 - 0.067	0.033 - 0.078	0.046 - 0.110	0.067 - 0.157

Other sizes available upon request

SatinBlast™ Packaging:

25kg Bags

SatinBlast™ Ordering Information:

Stock Code	**AOT-OASB**XXXX
Key	XXXX - Product Grade (e.g. S110 for S110)

PanaGrit™ Steel Grit

Product Description and Technical Data:

PanaGrit™ is manufactured from high carbon cast PanaShot™ steel shots, crushed to granular grit form and subsequently tempered to three different hardnesses (GH, GL and GP) to cater for different applications.

After tempering the grit is mechanically screened to produce 10 grades conforming to SAE standard specifications for blasting grits.

Grades of differing sizes and/or hardnesses specifically for specialised applications, i.e. roll etching, granite cutting are also produced.

PanaGrit™ is produced under a controlled manufacturing process to achieve a product of uniform hardness, density and microstructure; coupled with good toughness for durability.

These factors result in an abrasive of correct hardness and shape to perform its cleaning function as well as an extended abrasive life.

PanaGrit™ is widely used as a media for descaling steel components prior to coating. In this application the media is used almost exclusively in compressed air, recovery blast rooms. The angular shape and relative hardness of PanaGrit™ ensures rapid cleaning rates and excellent recyclability.

PanaGrit™ is also widely used in the foundry casting industry to remove sand from castings when the castings have been exposed to ultra high temperatures and the sand is baked on to such an extent that steel shot cannot remove it.

If steel components cannot be cleaned utilising centrifugal wheel airless blasting equipment and steel shot, PanaGrit™ offers the next viable alternative.

* Images for comparison purposes only

SAE G14 *SAE G16* *SAE G18* *SAE G25* *SAE G40* *SAE G50*

SAE Steel Grit Size Specifications:

Screen opening sizes and screen numbers with max. and min. cumulative percentage allowed on corresponding screens.

Screen	Screen	Metric	SAE Grit Number									
No.	Size (In)	Size (mm)	G10	G12	G14	G16	G18	G25	G40	G50	G80	G120
7	0.1110	2.80	0 %									
8	0.0937	2.36		0 %								
10	0.0787	2.00	80 %		0 %							
12	0.0661	1.70	90 %	80 %		0 %						
14	0.0555	1.40		90 %	80 %		0 %					
16	0.0469	1.18			90 %	75 %		0 %				
18	0.0394	1.00				85 %	75 %		0 %			
20	0.0331	0.850										
25	0.0280	0.710					85 %	70 %		0 %		
30	0.0232	0.600										
35	0.0197	0.500										
40	0.0165	0.425						80 %	70 %		0 %	
45	0.0138	0.355										
50	0.0117	0.300							80 %	65 %		0 %
80	0.0070	0.180								75 %	65 %	
120	0.0049	0.125									75 %	60 %
200	0.0029	0.075										70 %

PanaGrit™ Abrasive Properties:

Hardness (HRC) **GP** **GL** **GH**	 46 - 50 56 - 60 Min 60	**Microstructure** **GP** **GL** **GH**	 Martensite and Bainite Martensite and Bainite Martensite and Austenite
Shape	Angular	**Carbon %**	0.8 - 1.2
Bulk Density (kg/m³)	3700	**Silicon %**	0.4 - 1.2
Particle S.G.	> 7.6	**Manganese %**	0.5 - 1.2
Colour	Grey, Silver, Blue	**Sulphur %**	< 0.05
Size Standard	SAE	**Phosphorus %**	< 0.05

PanaGrit™ Packaging:

25kg Bags or Drums of 750kg/800kg	1 Tonne Pallet (40 x 25kg Bags) or Drums

PanaGrit™ Ordering Information:

Stock Code	**ASA-STG**XXXYY-Z
Key	XXX - Product SAE Number (e.g. 018 for SAE G18) YY - Product Hardness GH, GL and GP Z - D for Packing in Drums Blank for Standard Packing

PanaShot™ Steel Shot

Product Description and Technical Data:

PanaShot™ is manufactured by melting high quality steel scrap, that is subsequently atomised by pouring streams of the molten steel through high-pressure water jets.

The resultant shots are then homogenised by reheating and then subsequently refined during quenching.

SAE S110

The shots are then dried and reheated in a tempering furnace to produce the applicable hardness. The tempered shots are then mechanically screened to produce 11 grades conforming to SAE standard specifications for blasting shots.

Grades of differing sizes and/or hardnesses specifically for specialised applications, i.e. shot peening are also produced.

SAE S170

PanaShot™ is produced under a controlled manufacturing process to achieve a product of uniform harness, density and microstructure; coupled with good toughness for durability.

These factors result in abrasive of sufficient hardness to perform its cleaning function as well as an extended life.

SAE S230

PanaShot™ is widely used as a media for descaling steel components prior to coating. In this application the media is used almost exclusively in centrifugal wheel airless blasting equipment.

The round shape and relative softness of PanaShot™ ensures excessive wear is not imparted on the equipment.

SAE S280

PanaShot™ is also widely used in the foundry casting industry to remove sand from castings after removal from the mould.

When used in conjunction with the appropriate equipment, PanaShot™ is the ultimate abrasive blast media for steel cleaning or preparation due to its durability.

SAE S330

* Images for comparison purposes only

SAE S780 *SAE S660* *SAE S550* *SAE S460* *SAE S390*

SAE Steel Shot Size Specifications:

Screen opening sizes and screen numbers with max. and min. cumulative percentage allowed on corresponding screens.

Screen	Screen	Metric	SAE Shot Number										
No.	Size (In)	Size (mm)	S780	S660	S550	S460	S390	S330	S280	S230	S170	S110	S070
7	0.1110	2.80	0%										
8	0.0937	2.36		0%									
10	0.0787	2.00	⩾ 85%		0%	0%							
12	0.0661	1.70	⩾ 97%	⩾ 85%		⩽ 5%	0%						
14	0.0555	1.40		⩾ 97%	⩾ 85%		⩽ 5%	0%					
16	0.0469	1.18			⩾ 97%	⩾ 85%		⩽ 5%	0%				
18	0.0394	1.00				⩾ 96%	⩾ 85%		⩽ 5%	0%			
20	0.0331	0.850					⩾ 96%	⩾ 85%		⩽ 10%			
25	0.0280	0.710						⩾ 96%	⩾ 85%		0%		
30	0.0232	0.600							⩾ 96%	⩾ 85%	⩽ 10%		
35	0.0197	0.500								⩾ 97%		0%	
40	0.0165	0.425									⩾ 85%	⩽ 10%	0%
45	0.0138	0.355									⩾ 97%		⩽ 10%
50	0.0117	0.300										⩾ 80%	
80	0.0070	0.180										⩾ 90%	⩾ 80%
120	0.0049	0.125											⩾ 90%

Screen	Screen	Metric	AMS 2431 Peening Cast Steel Shot (Regular - ASR , High - ASH Hardness)										
			Shot Size										
No.	Size (In)	Size (mm)	780	660	550	460	390	330	280	230	170	110	070
6	0.1320	3.35	0%										
7	0.1110	2.80	⩽ 2%	0%									
8	0.0937	2.36	⩽ 50%	⩽ 2%	0%								
10	0.0787	2.00	⩾ 90%	⩽ 50%	⩽ 2%	0%							
12	0.0661	1.70	⩾ 98%	⩾ 90%	⩽ 50%	⩽ 2%	0%						
14	0.0555	1.40		⩾ 98%	⩾ 90%	⩽ 50%	⩽ 2%	0%					
16	0.0469	1.18			⩾ 98%	⩾ 90%	⩽ 50%	⩽ 2%	0%				
18	0.0394	1.00				⩾ 98%	⩾ 90%	⩽ 50%	⩽ 2%	0%			
20	0.0331	0.850					⩾ 98%	⩾ 90%	⩽ 50%	⩽ 2%			
25	0.0280	0.710						⩾ 98%	⩾ 90%	⩽ 50%	0%		
30	0.0232	0.600							⩾ 98%	⩾ 90%	⩽ 2%		
35	0.0197	0.500								⩾ 98%	⩽ 50%	0%	
40	0.0165	0.425									⩾ 90%	⩽ 2%	0%
45	0.0138	0.355									⩾ 98%	⩽ 50%	⩽ 2%
50	0.0117	0.300										⩾ 90%	⩽ 50%
80	0.0070	0.180										⩾ 98%	⩾ 90%
120	0.0049	0.125											⩾ 98%

PanaShot™ Abrasive Properties:

Shape	Round, Spherical	**Carbon %**	0.8 - 1.2
Hardness (HRC) **Standard** **Regular Hardness** **High Hardness**	 40 - 50 45 - 52 55 - 62	**Silicon %**	0.4 - 1.2
Bulk Density (kg/m³)	4450	**Manganese %**	0.5 - 1.2
Particle S.G.	> 7.4	**Sulphur %**	< 0.05
Colour	Grey, Silver	**Phosphorus %**	< 0.05
Size Standard	SAE	**Microstructure**	Martensite and Bainite

PanaShot™ Packaging:

25kg Bags	1 Tonne Pallet (40 x 25kg Bags)
900kg Drums	

PanaShot™ Ordering Information:

Stock Code	**ASA-STS**XXXY-Z
Key	XXX - Product SAE Number (e.g. 110 for SAE S110) Y - Blank for Standard SAE Grade P for Peening Grade (45 - 52 HRC) L for Peening Grade (55 - 62 HRC) Z - D for Packing in Drums
Stock Code	**ASA-STSMLXXXYY**
Key	XXX - Product Peening Shot (e.g. 230) YY - For Peening Shot Hardness Range 45 for AMS 2431 Peening Shot ASR (45 - 52 HRC) 55 for AMS 2431 Peening Shot ASH (55 - 62 HRC)

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Local Distributor