

Kemet

DIAMOND PRODUCTS



Kemet Diamond Products



Kemet
INTERNATIONAL LTD

Since 1938, Kemet has been at the forefront of precision polishing technology, producing quality diamond pastes, slurries and composite lapping/polishing materials in our purpose built facilities.

Now a truly international organisation, Kemet's activities span the world, spearheaded by companies in nine countries, all sharing the same commitment to customer support. This, along with more than 80 years' experience, means Kemet are here to provide you with the technical support to overcome all your lapping, polishing and cleaning challenges.



Contents

DIAMOND PRODUCTS 1-5

Liquid Diamond	1-2
Diamond Suspension	3
Diamond Spray	3
Diamond Gel	3
Diamond Compound	4-5

Ordering Information

Telephone:

+44(0)1622 607507

Sales Desk - Direct Line

+44(0)1622 755287

Enquiries & Technical Support

Email:

sales@kemet.co.uk

Website:

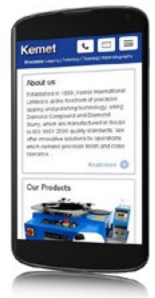
www.kemet.co.uk

Fax:

+44(0)1622 670915

Post

Kemet International Ltd,
Cuxton Road, Parkwood Trading Estate,
Maidstone, Kent ME15 9NJ, UK



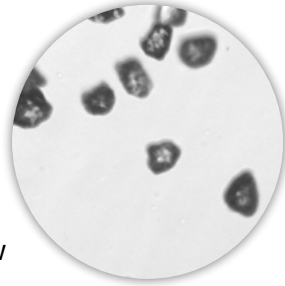
Kemet



Diamond Products

Kemet offer a wide range of standard and special Diamond Products formulated and manufactured in our quality controlled laboratories. Each is a special blend of diamond powder with a specific grading and concentration in a chemical carrier to give the optimum:

- Stock removal and surface finish.
- Ease of cleaning.
- Temperature resistance.
- Lubricity to prevent drying out.



With ever changing technologies, new Kemet Diamond Products are continually being developed to meet specific requirements. These products may well incorporate different types of diamond to suit the application such as synthetic or natural, monocrystalline or polycrystalline powder, suspended in a wide range of chemical carriers.

Our laboratories can also help to develop formulations specific to your application.

Micron	Grade
0.1	140,000*
0.25	25,000*
1	14,000*
3	8,000*
6	3,000*
8	1,800*
14	1,200*
25	600
45	300
60	230
90	170

*Estimated

• Diamond Grading

The exceptionally close grading standards developed by Kemet exceed many international standards and guarantee that Kemet Diamond Products are manufactured to the closest tolerances.

• Quality Control

Microscopic and computer analysis of the diamond powder ensures that it is exactly the correct grading and shape to maximise cutting performance.

• Consistency of Performance

Strictly manufactured to ISO 9001:2008 quality assurance standards - our guarantee that the quality will be consistent.

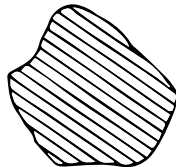
• User Friendly

Manufactured from the highest purity chemicals - safe to use and friendly to the environment.

We use only the best quality virgin diamond powder and the highest purity chemicals in Kemet Diamond Products.

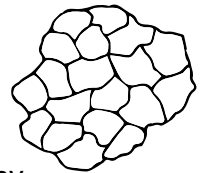
Monocrystalline:

This diamond has tough resilient crystal structure that gives sustained cutting power. It is the type of diamond used most commonly in Kemet Diamond Compounds and Slurries.



Polycrystalline:

Structure is 'raspberry-like', i.e. each particle is in fact a number of very small particles of microcrystallites bonded together. Stock removal and surface finish is better due to the many cutting points of the polycrystalline crystal.



Liquid Diamond

Our range of Kemet Liquid Diamond products are available as oil soluble, water soluble or as emulsions. The chemical composition of the carrier fluids is carefully controlled to ensure that they are compatible both with the Kemet Lapping Plate and the components being lapped.

- Precision graded diamond particles in a fluid.
- Optimum viscosity and chemical composition of each Liquid Diamond Product gives fast stock removal with the ability to produce superfine surface finishes.
- Suitable for dispensing with the Kemet Electronic Dispensing System thus eliminating wastage and reducing lapping costs.
- Specially formulated Liquid Diamond Products enable parts to be easily cleaned.
- Alcohol based slurry also available.



TYPE K (Oil / water emulsion) Liquid Diamond



An excellent, low viscosity oil/water emulsion suitable for all general purpose lapping.

Micron		400g			2000g		
		Standard	Strong	Extra Strong	Standard	Strong	Extra Strong
A	1/10	211001	211021	-	211080	-	-
	1/4	211002	211022	-	211081	-	-
	1/2	211003	-	-	211083	-	-
	1	211004	211024	-	211084	211105	-
	2	211005	211025	-	-	-	-
	3	211006	211026	211046	211086	211106	211126
	4.5	211007	211027	211047	211087	211107	211127
B	6	211008	211028	211054	211088	211108	211128
	8	211009	211029	-	211089	211109	211129
	10	211010	211030	211050	211132	211110	211130
	14	211011	211031	211051	211091	211111	211131
C	25	211012	211032	211052	211092	211112	211133
	45	211013	211033	211053	-	-	-

TYPE O (Oil based) Liquid Diamond



An excellent, general purpose, low viscosity oil based suspension suitable for heavy parts and high volumes.

Micron		400g			2000g		
		Standard	Strong	Extra Strong	Standard	Strong	Extra Strong
A	1/10	216001	-	-	216082	-	-
	1/4	216002	-	-	216083	-	-
	1/2	216003	-	-	216084	-	-
	1	216004	216024	-	216085	216104	-
	2	216005	216025	216045	216081	216105	216136
	3	216006	216026	216046	216086	216106	216137
	4.5	216007	216027	216047	216087	216108	216138
B	6	216008	216028	216048	216088	216107	216139
	8	216009	216029	216049	216089	216109	216140
	10	216016	216030	216050	216095	216110	216141
	14	216011	216031	216051	216092	216111	216142
C	25	216012	216032	216052	216090	216112	216143
	45	216013	216033	216053	216094	216113	216144

A = Final Polishing **B** = Lapping & Pre-polishing **C** = Rapid Stock Removal

FastCut (Water based) Liquid Diamond



FastCut offers a water based solution that, in tests, exceed the performance of oil based products by as much as 25%.

- The latest generation of water soluble liquid diamond
- Excellent stock removal
- Easy to clean
- Non-foaming
- Zero VOCs (volatile organic compounds)
- Available from 1 Micron to 25 Micron in 400g or 2000g

Micron	Product Code	
	400g	2000g
1	219416	219417
3	219418	219419
6	219420	219421
8	219422	219423
14	219424	219425
25	219426	219427

Diamond Suspension

Low viscosity, high concentration, **oil based** suspensions available in monocrystalline (Type OM) and polycrystalline (Type OP).

Aquapol is the next generation of **water based** diamond suspensions for sample preparation. Available in monocrystalline (Aquapol-M) and polycrystalline (Aquapol-P). Aquapol is easy to clean and non-foaming.

- Uniform suspension of diamond particles.
- No agitation required.
- Suitable for dispensing by Kemet Electronic Dispenser or alternative systems.
- **ZERO** Volatile Organic Compounds (VOC*)
- Colour coded for easy identification.
- Supplied in 400g bottles with trigger spray. Other sizes available upon request.



AQUAPOL-M		AQUAPOL-P		TYPE OM		TYPE OP	
Water Based Monocrystalline		Water Based Polycrystalline		Oil Based Monocrystalline		Oil Based Polycrystalline	
Micron	Code	Micron	Code	Micron	Code	Micron	Code
1	219450	1	219452	1/10	216321	1/10	216341
3	219440	3	219453	1/4	216323	1/4	216342
6	219448	6	219454	1/2	216322	1/2	216343
9	219442	9	219455	1	216324	1	216344
15	219444	15	219456	3	216326	3	216346
25	219446			6	216328	6	216347
				9	216329	9	216349
				15	216331	15	216350
				25	216332	25	216351
				45	216333		

Note to users of WM/WP suspensions - these are still available

Diamond Spray

Water soluble spray manufactured with monocrystalline diamond powder.

Supplied in 100g Pump Spray Dispenser

Micron	Monocrystalline	Polycrystalline
1/10	116000	-
1/4	116001	116036
1/2	116002	-
1	116003	116037
3	116004	116038
6	116005	116039
9	116006	116040
15	116007	116041



Diamond Gel

Kemet Diamond Gel was developed to combine the best features of Kemet Diamond Paste and Kemet Liquid Diamond. It is supplied in 30g.

- Ready for use without addition of fluid
- Viscosity of gel is retained, even over long periods
- Diamond particles uniformly distributed
- Dispensing Bottle makes for easy handling and economical dispensing
- Ideal for polishing large surfaces

Micron	Colour	Code
1	Blue	150370
3	Green	150442
6	Yellow	150450
8	Red	150873
9	Red	150465
15	Brown	150467
25	Mahogany	150719
30	Mahogany	150635
45	Purple	150449



* ZERO Volatile Organic Compounds (VOC) - not classified as an atmospheric pollutant and offer health and safety benefits. VOCs are organic chemicals that have a high vapour pressure at ordinary room temperature, some of which can be dangerous to human health and/or cause harm to the environment.

Type KD Diamond Compound

- Worldwide - The preferred choice.
- Universal Diamond Compound for rapid stock removal and superfine surface finish.
- Soluble in both oil and water.
- Recommended for Toolroom and Precision Production applications.

Type W Diamond Compound

- Water Soluble Diamond Compound.
- Recommended for precision engineering and electronic applications where water based products are preferred.
- Ideal for use on polishing cloths.

	Micron	Colour	Grade	Type KD			Type W			
				5g AppliKator	10g Syringe	20g Syringe	5g AppliKator	10g Syringe	20g Syringe	
Final Polishing	1/10	Grey	C1	111001	111125	111094	113001	-	113094	
			C2	111002	111126	111095	113002	113125	113095	
	1/4	Grey	C1	111003	111127	111096	113003	-	113096	
			C2	111004	111128	111097	113004	113128	113097	
	1	Blue	C1	111005	111129	111098	113005	113129	113098	
			C2	111006	111130	111099	113006	113130	113100	
			C3	111007	111131	111100	113007	113131	113099	
	3	Green	C1	111008	111132	111101	113008	113132	113101	
			C2	111009	111133	111102	113009	113133	113102	
			C3	111010	111134	111103	113010	113134	113103	
			C4	111011	111135	111104	113011	113135	113104	
	Lapping & Polishing	6	Yellow	C1	111012	111136	111105	113012	113136	113105
C2				111013	111137	111106	113013	113137	113106	
C3				111014	111138	111107	113014	113138	113107	
8		Red	C1	111015	111139	111108	113015	-	113108	
			C2	111016	111140	111109	113016	113141	113109	
			C3	111017	111141	111110	113017	-	113110	
14		Brown	C1	111019	111143	111112	113019	113143	113112	
			C2	111020	111144	111113	113020	113144	113113	
			C3	111021	111145	111114	113021	113145	113165	
Rapid Stock Removal		25	Mahogany	C1	111022	111146	111115	113022	113146	113115
				C2	111023	111147	111116	113023	113147	113116
				C3	111024	111148	111117	113024	113148	113166
	45	Purple	C1	111025	111149	111118	113025	113149	113118	
			C2	111026	111150	111119	113026	-	113119	
			C3	111027	111151	111120	113027	113151	113120	
	60	Orange	C1	111028	111152	111121	113028	113152	113121	
			C2	111029	111153	111122	113029	113154	113122	
	90	White	C1	111030	111154	111123	-	-	113123	
			C2	111031	111155	111124	113031	113153	113124	

Each micron size is available in a range of concentrations:- (C1 lowest concentration; C4 highest concentration).

The AppliKator (shown below) is a syringe designed to accurately meter out quantities of Kemet Diamond Compound, preventing waste and contamination.



Below is the Kemet 10g or 20g syringe



Diamond Compound Stick

Water soluble, stick Diamond Compound manufactured with Monocrystalline or Polycrystalline Diamond Powder. Allows easy application of Diamond Compound to Lapping and Polishing Discs eliminating the need for spatulas or manual application.



Micron	Size	Monocrystalline	Polycrystalline
1/10	10g	113187	-
1/4	10g	113188	113200
1	10g	113189	113201
3	10g	113190	113202
6	10g	113191	113203
8	10g	113192	113204
14	10g	113193	113205
25	10g	113194	-
45	10g	113195	-
60	10g	113196	-

Type L Diamond Compound

- Oil Soluble Diamond Compound specially developed for use on hard materials such as Tungsten Carbide, hardened Steels and Ceramics.
- High thermal stability of the chemical carrier ensures that Kemet Diamond Compound resists frictional heat, remains stable, and keeps its suspension properties under operating conditions.
- Recommended for Toolroom and General Production applications.



Final Polishing	Micron	Grade	Colour	5g AppliKator	10g Syringe	20g Syringe
				Code	Code	Code
Final Polishing	1	1-L-C1	Blue	112001	112069	112052
		1-L-C2		112002	112070	112053
	3	3-L-C1	Green	112003	112071	112054
		3-L-C2		112004	112072	112055
Lapping & Polishing	6	6-L-C1	Yellow	112005	112073	112143
		6-L-C2		112006	112074	112138
	8	8-L-C1	Red	112007	112075	112058
		8-L-C2		112008	112076	112059
	14	14-L-C1	Brown	112009	112077	112060
		14-L-C2		112010	112078	112061
Rapid Stock Removal	25	25-L-C1	Mahogany	112011	112079	112062
		25-L-C2		112012	112080	112063
	45	45-L-C1	Purple	112013	112081	112064
		45-L-C2		112014	112082	112065
		45-L-C3		112015	112086	112066
	60	60-L-C1	Orange	112016	112085	112067
		90-L-C1		112017	112084	112068

Each micron size is available in a range of concentrations:- (C1 lowest concentration; C4 highest concentration).

Lubricating Fluids

- Assists Kemet Diamond Products to cut and polish more effectively by absorbing frictional heat and diluting the lapping residue.
- Lubricant performance remains stable even when under high pressure.
- Manufactured from high purity chemicals.

Type	Description	Soluble in	Colour	450ml Trigger spray	2.5 Litres	25 Litres
W	Recommended for use on all Kemet Polishing Cloths as it helps to extend their life.	Water	Clear	301201	301101	301151
OS	Recommended when polishing tooling, moulds and similar components.	Oil	Blue	301203	301103	301112
W2	Developed for use with Kemet Diamond Suspension, particularly when used with Kemet Lapping Plates. (GW2 is odourless)	Water	Clear	301202	301102	301205
GW2		Water	Light green	301514	301108	-
LS	Where components need to undergo a water based cleaning operation after lapping.	Oil/Water	Blue	301204	301104	-
K	Assists smooth running of the lapping operation and helps to ensure a cleaner process.	Oil	Clear	301178	301124	301125
R OS2	For use where water is not permitted.	Oil	Red	301513	301512	-
BLUE	Improves cutting and polishing performance on cloths or plates.	Water	Blue	301200	301156	-



Our laboratories can also help to develop formulations specific to your application.

Kemet



Kemet International Ltd. Subsidiary Companies

Netherlands
Kemet Europe B.V

Singapore
Kemet Far East Pte Ltd

Japan / Korea
Kemet Japan / Kemet Korea

China
Kemet China Ltd

Malaysia
Kemet Precision (M) SDN BHD

Australia
Kemet Australia Pty Ltd

Kemet Products are available through a worldwide Network of Authorised Distributors in

Europe
Asia

Africa
Americas

Middle East
Australasia