

Kemet

Precision Lapping | Polishing | Cleaning | Materialography

DIAMOND PRODUCTS





Since 1938, Kemet has been at the forefront of precision polishing technology, producing diamond pastes, slurries and composite lapping/polishing materials in our purpose built facilities and strictly manufactured to ISO 9001:2015 quality standards.

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 85 years of experience, means Kemet are here to provide you with the technical support to overcome all your lapping, polishing and cleaning challenges.

Contents

DIAMOND PRODUCTS

1-4

Liquid Diamond	1-2
Diamond Suspension	2
Diamond Spray & Gel	3
Lubricating Fluid	3
Diamond Compound	4



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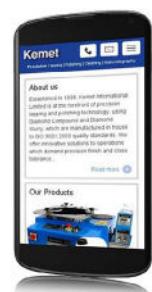
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We use only the best quality virgin Diamond Powder and the highest purity chemicals in Kemet Diamond Products

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.

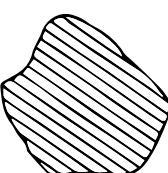
Our laboratories can also help to develop formulations specific to your application.

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

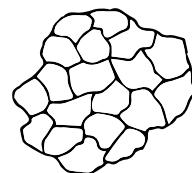
Monocrystalline:

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 oil/water soluble 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)

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

TYPE O (Oil based)

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

Micron		TYPE K						TYPE O					
		400g			2000g			400g			2000g		
		Standard	Strong	Extra Strong									
A	1	211004	211024	-	211084	211105	-	216004	216024	-	216085	216104	-
	2	211005	211025	-	-	-	-	216005	216025	216045	216081	216105	216136
	3	211006	211026	211046	211086	211106	211126	216006	216026	216046	216086	216106	216137
	4.5	211007	211027	211047	211087	211107	211127	216007	216027	216047	216087	216108	216138
B	6	211008	211028	211054	211088	211108	211128	216008	216028	216048	216088	216107	216139
	8	211009	211029	-	211089	211109	211129	216009	216029	216049	216089	216109	216140
	10	211010	211030	211050	211085	211110	211130	216016	216030	216050	216095	216110	216141
	14	211011	211031	211051	211091	211111	211131	216011	216031	216051	216092	216111	216142
C	25	211012	211032	211052	211092	211112	211133	216012	216032	216052	216090	216112	216143
	45	211013	211033	211053	-	-	-	216013	216033	216053	216094	216113	216144

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

Other micron grades available on request

FastCut

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

- Excellent stock removal
- Easy to clean & non-foaming
- Lubricating Fluid Type W9 recommended with FastCut



OptiPol

Optipol is a water soluble, high concentration slurry using polycrystalline diamond powder. These slurries are excellent for silicon carbide, carbon and tungsten carbide "gas seals", where a mirror finish, with a 3 light band convex flatness is required without the need to touch-up with a polishing pad process.

Micron	FastCut	
	400g	2000g
1	219416	219417
3	219418	219419
6	219420	219421
8	219422	219423
10	219435	219439
14	219424	219425
25	219426	219427

Micron	OptiPol	
	400g	2000g
0.1	250650	250654
1	250651	250655
3	250652	250656

Diamond Suspension



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.

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

- 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
- Lubricating Fluid Type W9 recommended with AquaPol



Aquapol-M			Aquapol-P			TYPE OM		TYPE OP	
Water Based Monocrystalline			Water Based Polycrystalline			Oil Based Monocrystalline		Oil Based Polycrystalline	
Micron	400g	1 Litre	Micron	400g	1 Litre	Micron	Code	Micron	Code
1/10	219471	219490	1/10	219472	219484	1/10	216321	1/10	216341
1/4	219459	219491	1/4	219461	219485	1/4	216323	1/4	216342
1/2	219457	219492	1/2	219463	219486	1/2	216322	1/2	216343
1	219450	219493	1	219452	219487	1	216324	1	216344
3	219440	219494	3	219453	219488	3	216326	3	216346
6	219448	219495	6	219454	219482	6	216328	6	216347
9	219442	219496	9	219455	219483	9	216329	9	216349
15	219444	219497	15	219456	219489	15	216331	15	216350
25	219446	219498				25	216332	25	216351

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

45 216333

Type WFP

Specially developed to obtain the best results for polishing water-sensitive materials. Short preparation times due to high concentration polycrystalline diamond suspensions.

Recommended use with WF Lubricating fluid.

- Oil and water-free
- Does not contain alcohol
- Non-Hazardous for shipping
- Environmentally friendly
- Miscible with alcohol

Type WFP	
Micron	400g
1	250677
3	250676
6	250678

EasyPol - Diamond & Lubricant in a Single Application

Easypol is a diamond suspension and lubricant combination, resulting in faster and simpler metallographic sample preparation. These suspensions result in high stock removal, allowing preparation time to be reduced.

- Lower cost of consumables
- Reduction in preparation time
- Easy to use and clean
- Water based

Micron	EasyPol (For routine metallographic sample preparation)			EasyPol+ (Special formula for reduced polishing times)		
	500ml	2.5 Litres	5 Litres	500ml	2.5 Litres	5 Litres
1/4	250600	-	-	-	-	-
1	250601	250621	250619	250606	250628	250613
3	250602	250618	250622	250607	250629	250614
6	250603	250623	250624	250608	250630	250615
9	250604	250625	250617	250609	250631	250616
15	250605	250626	250627	250610	250632	250633



* 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.

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

Diamond Spray



Water soluble diamond spray manufactured from Monocrystalline or Polycrystalline 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 Stick

Water soluble stick diamond compound, manufactured from Monocrystalline or Polycrystalline Diamond Powder.

- Eliminating the need for spatulas or manual application
- Allows easy application of Diamond Compound
- Supplied in 10g Applicator Stick

Micron	Monocrystalline	Polycrystalline
1	113189	113201
3	113190	113202
6	113191	113203
8	113192	113204
14	113193	113205



Diamond Gel



Kemet Diamond Gel was developed to combine the best features of Kemet Diamond Paste and Kemet Liquid Diamond. Supplied in 30g bottle.

- Ready for use without addition of lubricating 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

Lubricating Fluids

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



Type	VOC*	Description	Soluble in	Colour	450ml Trigger spray	2.5 Litres	25 Litres
W	Yes	Recommended for use on all Kemet Polishing Cloths as it helps to extend their life	Water	Clear	301201	301101	301151
W9	Yes	Recommended for use with FastCut Liquid Diamond & AquaPol	Water	Clear	-	301527	-
W2		Developed for use with Kemet Diamond Suspension, particularly when used with Kemet Lapping Plates.	Water	Clear	301202	301102	301205
GW2			Water	Light green	301514	301108	-
WF	Yes	Recommended for use with WFP Diamond Suspension	Water	Clear	301220	301221	-
BLUE		Improves cutting and polishing performance on cloths or plates	Water	Blue	301200	301156	-
LS		Where components need to undergo a water based cleaning operation after lapping	Oil/Water	Blue	301204	301104	-
K	Yes	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	-
OS	Yes	Recommended when polishing tooling, moulds and similar components	Oil	Blue	301203	301103	301112

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Diamond Compounds

Type KD

Universal Diamond Compound for rapid stock removal and superfine surface finish. Soluble in both oil and water.



Type W

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

Type L

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.

DiaVers

Oil-based carrier with superior lubricant qualities to improve the surface finish. Stable to 200°C which allows working on moulds in situ which have not yet cooled. Sharper diamond particles for superior cutting action. Better adhesion to laps such as felts or wooden laps. VOC Free*

SupaFinish

Oil based Polycrystalline Diamond Compound Developed for use in medical industry. Ideal for tough polishing applications where final surface finish is critical.

SupaFinish	
Micron	10g Syringe
1	151400
3	151401
6	151402

	Micron	Colour	Grade	Type KD			Type W			Type L			DiaVers		
				5g Applikator	10g Syringe	20g Syringe	5g Applikator	10g Syringe	20g Syringe	5g Applikator	10g Syringe	20g Syringe	5g Applikator	10g Syringe	20g Syringe
Final Polishing	1/10	Grey	C2	111002	111126	111095	-	-	-	-	-	-	-	-	-
	1/4	Grey	C2	111004	111128	111097	-	-	-	-	-	-	-	-	-
	1	Blue	C1	111005	111129	111098	113005	113129	113098	112001	112069	112052	115558	115541	115548
			C2	111006	111130	111099	113006	113130	113100	112002	112070	112053			
			C3	111007	111131	111100	113007	113131	113099	-	-	-			
	3	Green	C1	111008	111132	111101	113008	113132	113101	112003	112071	112054			
			C2	111009	111133	111102	113009	113133	113102	112004	112072	112055	115507	115542	115549
			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	112005	112073	112143	115508	115543	115550
			C2	111013	111137	111106	113013	113137	113106	112006	112074	112138			
			C3	111014	111138	111107	113014	113138	113107	-	-	-			
	8	Red	C1	111015	111139	111108	113015	-	113108	112007	112075	112058			
			C2	111016	111140	111109	113016	113141	113109	112008	112076	112059	115559	115544	115551
			C3	111017	111141	111110	113017	-	113110	-	-	-			
			C4	111018	111142	111111	113018	113142	113111	-	-	-			
Rapid Stock Removal	14	Brown	C1	111019	111143	111112	113019	113143	113112	112009	112077	112060	115560	115545	115552
			C2	111020	111144	111113	113020	113144	113113	112010	112078	112061			
			C3	111021	111145	111114	113021	113145	113127	-	-	-			
	25	Mahogany	C1	111022	111146	111115	113022	113146	113115	112011	112079	112062			
			C2	111023	111147	111116	113023	113147	113116	112012	112080	112063	115561	115546	115553
			C3	111024	111148	111117	113024	113148	113166	-	-	-			
	45	Purple	C1	111025	111149	111118	113025	113149	113118	112013	112081	112064	115562	115557	115555
			C2	111026	111150	111119	113026	-	113119	112014	112082	112065			
			C3	111027	111151	111120	113027	113151	113120	112015	112086	112066			
	60	Orange	C1	111028	111152	111121	113028	113152	113121	112016	112085	112067	115563	115547	115554
			C2	111029	111153	111122	113029	113154	113122	-	-	-			
	90	Cream	C1	111030	111154	111123	-	-	113123	112017	112084	112068	115563	115547	115554
			C2	111031	111155	111124	113031	113153	113124	-	-	-			

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

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