

Bio **DIAMANT**®

the superfinishing
abrasives of
the new millenium

The industry of the new millennium is one of precision and efficiency. It will make use of the "biotechnologies" as the preservation of our environnement should be our primary goal.

To meet this goal, LAM PLAN has developed and tested for five years a new line of superfinishing diamond products called Bio **DIAMANT**® :

Bio **DIAMANT**® products are biodegradable and present no danger for the environment.

Bio **DIAMANT**® products present no toxic or irritating or dangerous effects for the users.

Bio **DIAMANT**® products have proved to be more efficient than the traditional diamond products.

Bio **DIAMANT**® products meet the European directives 1999/45/EC dated May 31, 1999 which became effective July 30, 1999.

These products bear the exclusive trade mark LAM PLAN, the Bio **DIAMANT**® label.



BioDIAMANT® liquids M.M. Series 130-140 et 330-340

The BioDIAMANT® liquids M.M. of the series 130-140 and 330-340 maintain all of the qualities which have contributed to the reputation of the M.M. diamond liquids.

Their chemical base, specific to each series, ensures excellent performance even under extreme conditions of use.

For the finishing of very difficult parts, very high lapping pressures may be used without breaking the abrasive film.

The BioDIAMANT® formulation contributes to the stability and homogeneity of the abrasive film therefore ensuring better results while making significant savings of diamond liquid and fluid consumption.

The homogeneity of the products ensures that each spraying or dosage contains an equal quantity of diamond particles guaranteeing regularity in material removal and surface quality.

The BioDIAMANT® liquids may be used with the entire series of NEW LAM M.M. plates and the polishing disks of the 9000 and 400 series.

BioDIAMANT® liquids are "zero toxicity".

The BioDIAMANT® technology has been developed for both diamond liquids of the series 330-340 that are cleaned with water as well as diamond liquids of the series 130-140 that are cleaned with solvent.

With the BioDIAMANT® technology, the diamond liquids of series 130 and 140 that were cleaned with solvent can now be cleaned using detergents. The cleaning of the parts after lapping is therefore easier and faster.



Part number	Colour code	Definition
Series 130-140 Series 330-340		
M.M. 130 M.M. 330		extra strong
M.M. 131 M.M. 331		strong
M.M. 132 M.M. 332		semi strong
M.M. 133 M.M. 333		average
M.M. 134 M.M. 334		fine
M.M. 141 M.M. 341		strong
M.M. 142 M.M. 342		average
M.M. 143 M.M. 343		fine
M.M. 144 M.M. 344		extra-fine
M.M. 140		hyper-fine

Packaging : flasks of 250 g and 1000 g

The flexibility and the experience of LAM PLAN in matters of productivity make the adaptation of a BioDIAMANT® formula, water or solvent, possible for all specific industrial requirements.

CONTACT the hotline, E-mail : biodiamant@lamplan.com for any enquiries.

Lubricating fluids, M.M. Series 990-140, 712 et 705

The lubricating fluids of the series M.M. cannot be separated from the DIAMOND liquids M.M. and have the following functions : the forming of an abrasive film, the dilution of the lapping sludge and the cooling of the support thanks to their heat removal effect.

The quality of their viscosity enables the formation of a durable abrasive film; they offer a good resistance to compression on lapping machines with pneumatic pressure.

A fluid must be free of impurities. The care bestowed upon the production of the lubricating fluids excludes all solid particles. The lubricating fluids of the M.M. series are compatible with the BioDIAMANT® abrasives.



Type	Part number	Conditioning	Use
M.M. 990-140	07 MM711 30 07 MM711 40	1 litre 5 litres	With BioDIAMANT® liquids M.M. series 130-140
M.M. 712	07 MM712 30 07 MM712 40 07 MM712 50	1 litre 5 litres Pulmatic 350 cc	With BioDIAMANT® liquids M.M. series 330-340 and BioDIAMANT® pastes serie 100
M.M. 705	07 MM705 30 07 MM705 50	1 litre Pulmatic 350 cc	With the BioDIAMANT® pastes series 200-210

The BioDIAMANT® pastes series 100, 200 and 210

The BioDIAMANT® pastes are incomparable diamond abrasive compounds suitable for all prepolishing and polishing works in precision engineering electronics.

These pastes contain diamond powder free of any impurities, therefore guaranteeing the maximum cutting power of the diamond. The calibration of the grains is perfect; they are uniformly distributed and held in suspension in a chemically pure ingredient.

The composition of these chemical bases is exclusively based on biodegradable components which do not represent a danger for the environment.

For each industry's requirements, a choice is made between bases which are soluble in water or oil, and the different concentrations of diamond.

The BioDIAMANT® formula gives a more regular and more fluid abrasive film permitting an immediate cutting action on the part to be polished, and this without any additional fluid. Furthermore, shine is improved and the thixotropy remarkable (polishing of warm moulds)

The concentration of the pastes has a direct effect on the rapidity of the polishing operation. A high concentration is a guarantee of good efficiency.

With the type of each BioDIAMANT® paste (for example : 6.103), you will be able to recognize the series, and the solubility, the granulation and the concentration.



Example :

Type of paste	6.	10	3
Granulation	6 μ		
Series		100	
Concentration			3

Serie 100

Soluble in water. Used with lubricating fluid type 712. Recommended for finishing and superfinishing operations, up to the optical polish. The brilliance obtained is exceptional for mirror finish.

Packaging : 10 g syringe

AVERAGE CONCENTRATION	TYPE	010.102	025.102	-	-	3.102	6.102	8.102	14.102
	PART N°	01 99102 00	01 97102 00	-	-	01 03102 00	01 06102 00	01 08102 00	01 14102 00
HIGH CONCENTRATION	TYPE	010.103	025.103	1.103	2.103	3.103	6.103	8.103	14.103
	PART N°	01 99103 00	01 97103 00	01 01103 00	01 02103 00	01 03103 00	01 06103 00	01 08103 00	01 14103 00
EXTRA HIGH CONCENTRATION	TYPE	-	-	1.105	2.105	3.105	6.105	8.105	14.105
	PART N°	-	-	01 01105 00	01 02105 00	01 03105 00	01 06105 00	01 08105 00	01 14105 00

Serie 200

Soluble in oil. Used with lubricating fluid type 705/2. Recommended for roughing and prepolishing operations. Withstands high temperatures.

AVERAGE CONCENTRATION	TYPE	6.202	8.202	14.202	-	-	-	-
	PART N°	01 06202 00	01 08202 00	01 14202 00	-	-	-	-
HIGH CONCENTRATION	TYPE	6.203	8.203	14.203	25.203	40.203	60.203	90.203
	PART N°	01 06203 00	01 08203 00	01 14203 00	01 25203 00	01 40203 00	01 60203 00	01 90203 00
EXTRA HIGH CONCENTRATION	TYPE	6.205	8.205	14.205	25.205	40.205	-	-
	PART N°	01 06205 00	01 08205 00	01 14205 00	01 25205 00	01 40205 00	-	-

Serie 210

Soluble in oil. Used with lubricating fluid type 705/2. High concentration; ensures a very high efficiency on hard and extra-hard materials.

HIGH CONCENTRATION	TYPE	1.213	3.213	6.213	8.213	14.213	25.213	40.213	60.213	90.213
	PART N°	01 01213 00	01 03213 00	01 06213 00	01 08213 00	01 14213 00	01 25213 00	01 40213 00	01 60213 00	01 90213 00

Granulation

Microns	1/10	1/4	1	2	3	6	8	14	25	40	60	90
Mini / Maxi	0-0,25	0-0,5	0-0,2	1-3	2-4	4-8	6-12	10-20	20-30	30-50	50-70	70-110
Mesh	200 000	100 000	14 000	11 000	8000	3000	1800	1200	600	325	270	230

The BioDIAMANT® gels M.M. Series 30-40, 530-540 and 630-640

The BioDIAMANT® gels used for polishing moulds and metal tools advantageously replace the diamant pastes in syringes. The composition of the BioDIAMANT® gels associates the efficiency of the pastes and the wetting power of the diamond liquids especially developed for polishing in production.

The series M.M. 530-540 with their high concentration have a cutting power which is equivalent to the cutting power of the pastes with as additional advantages a very good fluidity and a high chemical stability. They are not sensitive to the variations of temperature and humidity.

The BioDIAMANT® gels series M.M. 30-40 are close to the diamond liquids and are recommended for big surfaces.

Their packaging of 100 g makes them very attractive from an economic point of view.



Series M.M. 30-40 Packaging 100 g

DESIGNATION	GRAIN/MICRON	PART NUMBER
M.M. 30	45	02 MM030 20
M.M. 31	30	02 MM031 20
M.M. 32	15	02 MM032 20
M.M. 33	9	02 MM033 20
M.M. 41	8	02 MM041 20
M.M. 42	6	02 MM042 20
M.M. 43	3	02 MM043 20
M.M. 44	2	02 MM044 20
M.M. 45	1	02 MM045 20
M.M. 46	3/4	02 MM046 20

The formula of BioDIAMANT® ensures a very good distribution of the abrasive film as well as an excellent adherence to the part to be polished.

These characteristics lead to exceptional results in material removal and in brilliance.

The BioDIAMANT® gels in oil bases, serie 630-640 have an exceptional resistance to high temperatures, which makes them particularly performing on hot moulds.

For their use, a drop of gel (0,01 g) is placed on the piece with a very slight pressure on the flask. For a prolonged polishing, it is recommended to add diamond gel regularly in small quantities instead of a single and important dose. If very high polishing speeds are used and an abnormal temperature rise occurs, it is possible to add some lubricating fluid LAM PLAN M.M. 705.

Alcohol will be used for cleaning.

Series M.M. 530-540 and 630-640 Packaging 20 g

DESIGNATION	GRAIN/MICRON	PART NUMBER Oil basis (high temperature)	PART NUMBER Water basis
M.M. 530 / 630	45	02 MM630 10	02 MM530 10
M.M. 531 / 631	30	02 MM631 10	02 MM531 10
M.M. 532 / 632	15	02 MM632 10	02 MM532 10
M.M. 533 / 633	9	02 MM633 10	02 MM533 10
M.M. 541 / 641	8	02 MM641 10	02 MM541 10
M.M. 542 / 642	6	02 MM642 10	02 MM542 10
M.M. 543 / 643	3	02 MM643 10	02 MM543 10
M.M. 544 / 644	2	02 MM644 10	02 MM544 10
M.M. 545 / 645	1	02 MM645 10	02 MM545 10
M.M. 546 / 646	3/4	02 MM646 10	02 MM546 10
M.M. 547 / 647	1/4	02 MM647 10	02 MM547 10
M.M. 548 / 648	1/10	02 MM648 10	02 MM548 10

Pulmatic BioDIAMANT® Serie 313

Used for distribution of the diamond abrasive in the polishing of important surfaces, the PULMATIC BioDIAMANT® replaces the traditional sprayers. As propulsion gas is no longer in use, only the ambient air is pumped manually. The packaging of the PULMATIC contains 75 g of diamond product.

The formulation of BioDIAMANT® eliminates the problems of odour, while ensuring a better cutting power and thus a quicker polishing.



Serie 313 Packaging 75 g

DESIGNATION	GRAIN/MICRON	COLOUR	PART NUMBER
40 313	40	purple	03 40313 00
25 313	25	brown	03 25313 00
14 313	14	brown	03 14313 00
10 313	10	brown	03 10313 00
8 313	8	pink	03 08313 00
6 313	6	yellow	03 06313 00
3 313	3	green	03 03313 00
2 313	2	blue	03 02313 00
1 313	1	blue	03 01313 00
025 313	1/4	neutral	03 97313 00
010 313	1/10	neutral	03 99313 00

Dosage sticks Bio **DIAMANT**[®] M.M. Series 1 30-1 40

The Bio **DIAMANT**[®] dosage sticks are meant to be used manually.

The precise dosing and distribution of the diamond paste is ensured by a graduated cylinder. Each division is equal to 0,2 gramme. For example, this quantity of paste is sufficient for the loading of a lapping block of 400 mm diametre. The paste is generally applied onto the lapping block.

The formulation Bio **DIAMANT**[®] optimizes the abrasive film and ensures a very good cutting.



Series 1 30-1 40

Packaging 10 g

Serie 1 30 - roughing		
DESIGNATION	DEFINITION	PART NUMBER
M.M. 131	extra strong	01 MM131 00
M.M. 132	strong	01 MM132 00
M.M. 133	semi-strong	01 MM133 00
M.M. 134	average	01 MM134 00
M.M. 135	fine	01 MM135 00
Serie 1 40 - finish		
DESIGNATION	DEFINITION	PART NUMBER
M.M. 141	strong	01 MM141 00
M.M. 142	average	01 MM142 00
M.M. 143	fine	01 MM143 00
M.M. 144	extra-fine	01 MM144 00
M.M. 145	hyper-fine	01 MM145 00



ISO 9002

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