



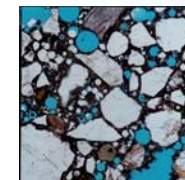
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Precision Materials Processing

# Consumable Product Catalogue



Visit us at [www.logitech.uk.com](http://www.logitech.uk.com)



**ISO 9001: 2008**

BSI Registered

12025

# LOGITECH ONLINE

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Visit Logitech online at: [www.logitech.uk.com](http://www.logitech.uk.com) and you will find an information rich site that is easy to navigate and entirely responsive to your needs. The site lets you view products, retrieve product data, learn about special offers and request a quote - all with just a few simple, time-saving keystrokes.

## Our website provides:

- 24/7 access to product information
- Clear product descriptions
- Comprehensive FAQ section
- Access to product data & SDS sheets
- Information on application process routes

Alternatively, if you have any questions, call us on: +44 (0) 1389 875444 or email: [enquiries@logitech.uk.com](mailto:enquiries@logitech.uk.com).

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# ORDERING INFORMATION & CUSTOMER SERVICE

## Ordering Information

You can place an order by contacting our US technical sales department as follows:

**Web:** [www.logitech.uk.com](http://www.logitech.uk.com)  
**Email:** [enquiries@logitech.uk.com](mailto:enquiries@logitech.uk.com)  
**Phone:** +44 (0) 1389 875444  
**Fax:** +44 (0) 1389 890956

## Payment Methods Accepted:



*Freight and Insurance will be charged extra at cost.*

## Questions & Queries

For more information:

E: [enquiries@logitech.uk.com](mailto:enquiries@logitech.uk.com)  
T: +44 (0) 1389 875444

## After Sales Support

In addition to the exceptional quality and results achieved by using Logitech products, all products are backed up the renowned superior support that customers have come to expect. Logitech are not simply an equipment and consumables supplier - we supply full after sales support and can offer advice on how customers can maximise their product and equipment performance.





# MEASUREMENT TABLES

### Length

Inches	Millimetres (mm)	Microns	Nanometres (nm)	Angstroms (Å)
0.000001 (1 micro-inch)	0.000025	0.0254	25.4	254
0.00001 (10 micro-inches)	0.000254	0.254	25.4	2,540
0.00004 (0.04 thou)	0.001	1	1,000	10,000
0.0001 (1 ten thou)	0.00254	2.54	2,540	25,400
0.001 (1 thou or mil)	0.025	25.4	25,400	254,000
0.04 (40 thou)	1	1,000	1,000,000	10,000,000
1	25.4	25,400	25,400,000	254,000,000

### Hardness

Mohs Standard	Mohs #	Other Materials	Knoop #	Vickers #	Rockwell A #
Talc	1	Lead	2	50	
Gypsum	2	Gold	32	60	Optical polish
Calcite	3	MCT			
Fluorite	4	Ice (-5 °C)	120	100	
		GaAs	150	200	
Apatite	5	InP (4.5)	400	392	3 micron lap
		LiNbO3 (4.5)			
Feldspar	6	Sphene	560	528	
		Glass			
Quartz	7	Steel (4-6)	700	1,000	
		Tungsten			
Topaz	8	Spinel	1,300	2,000	Sawn finish
		Silicon Carbide			
Corundum	9	Tin, W3C	1,800	3,000	
		Sapphire			
Diamond	10	TiC	6,000	10,000	

### Standard Conversions

1.000	Newton	Pounds/Force	0.225
1.000	Micron	Mil	0.040
1.000	Millimetre	Inch	0.039
1.000	Litre	Gallons	0.264
1.000	Millilitre	Ounce	0.033
1.000	Bar	PSI	14.500
1.000	Square cm	Square Inch	0.155
1.000	Kilogram	Pounds	2.205

### Flatness

Fringes	Wavelength	Departure (micron/cm)	83mm wafer (microns)
4	2 lambda	1.2	10
2	lambda	0.6	5
1	lambda / 2	0.3	2.5
1/2	lambda / 4	0.15	1.25
1/5	lambda / 10	0.06	0.5
1/10	lambda / 20	0.03	0.25

### Surface Roughness (Ra)

Microinch	Microns	Nm	Angstroms	Appearance
0.01	0.00025	0.25	2.5	
0.1	0.0025	2.5	25	Optical polish
0.5	0.0125	12.5	125	
1.0	0.025	25	250	
4	0.10	100	1,000	3 micron lap
10	0.25	250	2,500	
40	1.0	1,000	10,000	
100	2.5	2,500	25,000	Sawn finish
1,000	25	25,000	250,000	

### Parallelism

Arc minutes (')	Arc seconds (")	Linear (microns/cm)	83mm wafer (microns)
1/300	0.2	0.01	0.083
1/60	1	0.05	0.415
1/30	2	0.10	0.830
1/12	5	0.25	2.00
1/6	10	0.50	4.10
1/3	20	1.0	8.30
1/2	30	1.5	12.45
1 (1/60 degree)	60	2.9	24
2	120	5.8	48.14
3 (1/20 degree)	180	8.7	72.21

# CONSUMABLE PRODUCT CATALOGUE

## Precision Materials Processing

### Introduction

Logitech consumables are carefully chosen to work in unison with our sample processing systems to obtain optimum performance and maximise system lifespan.

Through our extensive experience in materials processing, we have gained a tremendous amount of knowledge of consumables and how best to use them.

As a result, we source only the highest quality products and rigorously test them on the quality of result produced and on the suitability for the many precision materials processing applications for which Logitech systems are used.

In fact, our selection process is so thorough that we only use Logitech consumables in our own laboratory.

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# CALCINED ALUMINIUM OXIDE POWDERS

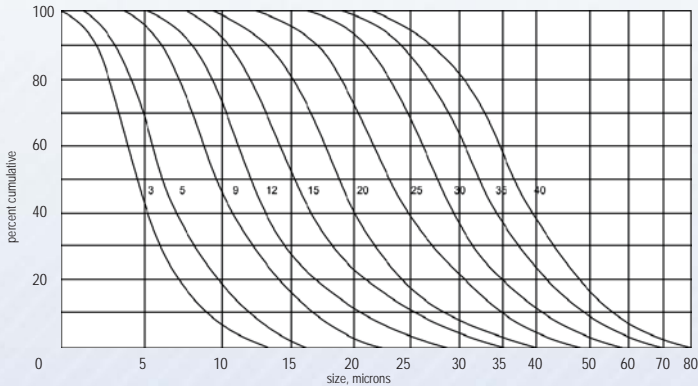
Logitech Calcined Aluminium Oxide Powders are produced using a unique process which grades particles in sizes and shape more closely than possible by normal means. This makes it especially effective when used on hard materials such as ceramics, silicon and hardened steel.

## Calcined Aluminium Oxide Lapping Powders

The particles produced by this process are flat, and tend to lie parallel to the surface being processed. Working pressure is, therefore, more evenly spread, breakdown of particles is reduced and abrasiveness is retained for a longer period. Due to the close grading and flat particle shape, calcined aluminium oxide powders are suitable for a wide range of precision lapping and polishing operations and offer many advantages. These include:

- Improved Surface Finish - by keeping the lapping / polishing time constant, substantial surface finish improvements can be obtained.
- Increased Particle Size - Due to the surface quality improvements, larger particle sizes can be used to produce the same quality of components. This provides distinct improvements in normal process times and leads to greater production output in addition to higher quality surfaces.

Particle Size Distribution Curves



Code	Micron size	Pack Size	Description
0CON-007	1	5 kg	Suitable for high precision optical component polishing, & as the final polishing stage for certain types of thin rock section.
0CON-008	3	5 kg	The most commonly used particle size. Suitable for a wide range of fine lapping applications with semiconductor and optical materials.
0CON-009	9	5 kg	Used for rapid stock removal on delicate semiconductor materials, such as GaAs and optical components.
0CON-010	12	5 kg	Applications include initial lapping of piezo-electric crystals prior to final lapping with 3 and 1 micron abrasives.
0CON-011	15	5 kg	Suitable for initial lapping of precision optical components and for final polishing of "hard" material components.
0CON-012	20	5 kg	Applications include "backlapping" of silicon wafers and fine lapping of quartz and sapphire components.
0CON-013	30	5 kg	Used for coarser lapping of components such as mechanical seals, or with semiconductor and optical materials where high stock removal rates are required.
0CON-030	50	5 kg	Used for coarser lapping of components such as mechanical seals, or with semiconductor and optical materials where high stock removal rates are required.

# GENERAL SUPPLIES



## General Supplies

Lubricants, Optical pitches, Coolants & Vacuum Oils

Logitech Oils are designed to ensure the efficient and smooth functioning of Logitech equipment requiring a source of oil. These oils are produced to a very high standard, therefore safeguarding Logitech machines and components from excessive wear.

Logitech Ultragrade 19 Vacuum Oil is a high quality oil designed to ensure the smooth operation of Logitech machines incorporating a Speedivac or Vacuum Pump.

CC Lube is an effective lubricant for ensuring the smooth operation of the piston components in all Logitech Precision Jigs. Once the jig has been dismantled in accordance with Logitech instructions, CC Lube is easily applied from its syringe.

Product Type: Ultragrade 19 Vacuum Oil  
Appearance: Pale yellow to clear  
Boiling Point: 380 °C (716 °F)  
Flashpoint: 200 °C (392 °F)  
Specific Gravity: 0.86  
Quantity supplied: 1 litre pack

Product Type: CC Lube (semi-solid paste)  
Appearance: White to pale yellow  
Boiling Point: <316 °C (600.8 °F)  
Flashpoint: 105 °C (221 °F)  
Grading: FEPA 42-GB-1984  
Melting Point: 260 °C (500 °F)  
Quantity supplied: 1 x 20ml syringe

Product Type: CC Lube (semi-solid paste)  
Appearance: White to pale yellow  
Boiling Point: <316 deg °C (600.8 °F)  
Flashpoint: 105 deg °C (221 °F)  
Grading: FEPA 42-GB-1984  
Melting Point: 260 deg °C (500 °F)  
Quantity supplied: 1 x 20ml syringe

Code	Product	Pack Size	Description
0CON-319	CC-Lube	20ml	CC-Lube (Jet Lube) oil for PP5, PP6, PP8 and PLJ2 piston lubrication.
0CON-306	Vacuum Oil	1 litre	Ultragrade 19 Vacuum Oil, for vacuum pumps supplied with LP50, VS2, IU30 & WSBU.
0CON-235	Dressing Stone	12	Dressing stone for use with the GTS1 & CS30 saws.
0CON-241	Keystone Blue Dye	1 kg	Keystone Blue Dye, for use when impregnating geological samples with synthetic resins.
0CON-255	Diamond File	1	Diamond file for use with glass lapping plates and glass test blocks.
0CON-285	Ceramic Tiles	5	Unglazed ceramic mounting tiles for use with the APD1 & APD2 saws.
0CON-289	M27 Soluble Oil	1 litre	Oil used as a coolant for the APD1, APD2 & GTS1 saws.
0CON-316	Cooling Transfer	1 litre	Cooling oil for WSBU Wafer Substrate Bonding Units.



# SAW BLADES AND WIRES

Saw Blades & Wires for multi application areas.

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## Saw Blades and Cutting Wires

High quality diamond saw blades to fit all Logitech saws.

The main application areas include:

Logitech has developed a series of precision saws to meet a wide range of requirements within an extremely diverse range of materials processing applications.

- Geology and Thin Rock Section production
- Semiconductors i.e. Gallium Arsenide
- Electro-optics i.e. Lithium Niobate and similar materials
- Optics i.e. Laser Rods, Nd:YIG, Nd:YAG etc.

The range of saws produced by Logitech cater for the requirements of the small scale laboratory, producing high quality thin sections, through to batch production of valuable crystal materials.

Code	Diameter	Pack Size	Description	Machine
0CON-203	8" / 200mm	1	Diamond rimmed annular blade for the AXL1 saw.	AXL1 Saw
0CON-205	10" / 250mm	1	Diamond Cut-off blade. Blade thickness 1.6mm, 15.9mm arbor for the CS10 saw.	CS10 Saw
0CON-206	8" / 200mm	1	Diamond cut-off blade, suitable for cutting most common rock types on the CS30 saw. Blade thickness 1.5mm, 22mm arbor.	CS30 Saw
0CON-208	6" / 150mm	1	Thin rimmed diamond blade for the Model 15 saw. Blade thickness 0.25mm, 12.7mm arbor.	Model 15 Saw
0CON-209	6" / 150mm	1	Rimmed diamond blade for the Model 15 saw. Blade thickness 0.4mm and t-size 0.5mm with 12.7mm arbor.	Model 15 Saw
0CON-210	4" / 100mm	1	Thin rimmed diamond blade for the Model 15 saw. Blade thickness 0.3mm, t-size 0.4mm with 12.7mm arbor.	Model 15 Saw
0CON-215	4" / 100mm	1	Silicon Carbide blade, 180 grit for the Model 15 saw. Blade thickness 0.3mm, 12.7mm arbor.	Model 15 Saw
0CON-216	6" / 150mm	1	Silicon Carbide blade, 320 grit for the Model 15 saw. Blade thickness 0.5mm, 12.7mm arbor.	Model 15 Saw
0CON-219	0.3mm	5	60 micron diamond wire, for minimal damage cutting of delicate crystal materials on the Model 15 saw.	Model 15 Saw
0CON-220	0.2mm	5	60 micron diamond wire, for minimal damage cutting of delicate crystal materials on the Model 15 saw.	Model 15 Saw
0CON-283	10" / 250mm	1	Diamond rimmed annular blade for the APD1 saw.	APD1 Saw
0CON-284	12" / 300mm	1	Diamond rimmed annular blade for the APD2 saw.	APD1 Saw
0CON-294	10" / 250mm	1	Diamond rimmed annular blade for the APD1 saw, 320 grit.	APD1 Saw
0CON-320	6" / 150mm	1	Diamond rimmed blade (12.7mm bore) for APD1 and APD2 saws.	APD1 and APD2 Saws
0CON-321	4" / 100mm	1	Diamond rimmed blade (12.7mm bore) for APD1 and APD2 saws.	APD1 and APD2 Saws
0CON-329	12" / 300mm	1	Diamond cut-off blade, suitable for cutting most rock types on the GTS1 saw. Blade thickness 2mm, 15.9mm arbor.	GTS1 Saw
0CON-330	6" / 150mm	1	Diamond rimmed blade (12.7mm bore) for APD2 saws. Blade thickness 0.2mm.	APD2 Saw
0CON-230	0.2mm	1	Steel cutting wire for AWS1 Abrasive Wire Saw.	AWS1 Saw
0CON-231	0.25mm	1	Steel cutting wire for AWS1 Abrasive Wire Saw.	AWS1 Saw

# SILICON CARBIDE POWDERS



Silicon Carbide is a lapping / polishing compound suitable for fine lapping of a range of geological, semiconductor and optical materials.

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## Silicon Carbide Lapping Powders

Logitech Silicon Carbide Powders are manufactured for use in high precision lapping and polishing operations. Supplied in a wide range of grit sizes, these high quality abrasive powders can be used where repeatability of material removal rate is required.

Typical applications include:

- Thin rock section production
- Silicon wafer backthinning
- Processing of ferrites and other ceramic components
- Calcified tissue thin section production

Silicon Carbide abrasive is also recommended for lapping the chuckface of the Logitech Precision Lapping and Polishing Jigs and fixtures to restore chuckface parallelism.

### Product Data

Product:	Silicon Carbide Lapping Powder
Colour:	Dark grey
pH:	6.8 - 7.2
Shape:	Blocky, with sharp edges
Grading:	FEPA 42-GB-1984
Bulk Density:	FEPA 44-GB-1986
Surface Chemistry:	FEPA 26-GB-1968
Knoop100 Hard No:	2480
Specific Gravity:	3.2g/cc
Crystal Structure:	Hexagonal
Fracture:	Conchoidal

### Typical Chemical Analysis (%)

Silicon Carbide:	97.60
SiO <sub>2</sub> :	0.60
Si:	0.80
Fe:	0.20
Al:	0.30
Carbon:	0.50
Magnetic Iron:	0.04

Code	Pack Size	Micron Size	Grit Size	Description
0CON-006	5 kg	3	1200	Fine lapping / polishing compound suitable for fine lapping of a range of geological, semiconductor and optical materials.
0CON-001	5 kg	5	1000	Fine lapping / polishing compound suitable for fine lapping of a range of geological, semiconductor and optical materials.
0CON-002	5 kg	9	600	Applications include petrographic thin rock section production and silicon wafer lapping.
0CON-003	5 kg	17	400	Suitable for coarse lapping applications or where rapid material removal is required.
0CON-004	5 kg	29	320	Mean particle size 29 microns.
0CON-005	5 kg	45	240	Mean particle size 45 microns.





# FUSED ALUMINIUM OXIDE & BORON CARBIDE POWDERS

These powders are manufactured for use in lapping operations where high precision finishes are specified on hard materials.

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## Fused Aluminium Oxide Lapping Powders

Logitech Fused Aluminium Oxide powders are manufactured to comply with the exacting standards required for precision lapping and optical polishing operations.

Formulated for rapid stock removal, with high quality surface finish, these abrasives will perform with outstanding efficiency. They have excellent cleanliness and capillarity and are low in magnetic content.

### Product Data

Product Type:	Fused Aluminium Oxide
Colour:	Grey Brown
pH:	7.5 - 8.5
Hardness, Moh:	9.0
Grading:	FEPA 42-GB-1984
Specific Gravity:	3.8
Particle Shape:	Equi-dimensional

### Typical Chemical Analysis (%)

Aluminium Oxide:	96.00
Silica:	1.10
Iron Oxide (Fe <sub>2</sub> O <sub>3</sub> ):	0.25
Titanium Oxide:	2.55

Code	Micron size	Pack Size	Description
OCON-017	3	5 kg	Fine Lap
OCON-018	5	5 kg	A range of micron sizes, enabling precision materials to be processed from the initial roughing stage through to fine lapping and polishing.  These powders are carefully processed to ensure correct particle size distribution. Particle shape is as uniform as the most advanced manufacturing techniques will permit.
OCON-019	9	5 kg	
OCON-020	12	5 kg	
OCON-021	15	5 kg	

## Boron Carbide Lapping Powders

Logitech boron carbide lapping powders are very hard abrasives that replace the need for more expensive hard abrasive powders, such as those harder than silicon carbide. Applications for use of boron carbide include the processing of ceramic materials, very hard optical materials such as sapphire, heat treated alloys and very hard mineral sections.

### Product Data

Product Type:	Boron Carbide
Colour:	Black
pH:	N/A
Percentage content:	98%
Density:	3.95
Particle Shape:	Granular

Code	Grit size	Pack Size	Description
OCON-024	1000	1 kg	Fine Lap
OCON-025	600	1 kg	A range of micron sizes, enabling hard materials to be processed from the initial roughing stage through to fine finishing.  Manufacturing and quality control procedures used in the production of these powders ensure that the end product is exceptionally clean and closely sized.
OCON-026	400	1 kg	
OCON-027	320	1 kg	
OCON-028	240	1 kg	
OCON-029	180	1 kg	

# CARRIER DISCS & SUBSTRATES



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## Glass Carrier Discs/Substrates

Logitech Glass Carrier Discs are used for the temporary support of both semiconductor and opto-electronic wafers during thinning and polishing operations.

Higher density glass is more stable for 6 inch diameter applications and will not distort during the bonding process.

Code	Size	Pack size	Description
OCON-336	83mm	1	BK7 glass substrate, pre-lapped.
OCON-338	105mm	1	BK7 glass substrate, unlapped.
OCON-337	105mm	1	BK7 glass substrate, pre-lapped.
OCON-335	160mm	1	BK7 glass substrate, pre-lapped.
OCON-168	75mm	1	Float glass, pre-lapped parallel.
OCON-164	83mm	1	Float glass, flat lapped on one side only.
OCON-165	83mm	1	Float glass, unlapped parallel.
OCON-166	83mm	1	Float glass, pre-lapped parallel.
OCON-170	105mm	1	Float glass, unlapped parallel.
OCON-171	83mm	1	Porous substrate for Glycol Phthalate.
OCON-173	105mm	1	Float glass, pre-lapped parallel.
OCON-179	112mm	1	Float glass, pre-lapped parallel.
OCON-181	83mm	1	Float glass, pre-lapped parallel, one face polished.
OCON-182	105mm	1	Float glass, pre-lapped parallel, one face polished.
OCON-180	112mm	1	Float glass, pre-lapped parallel, one face polished.
OCON-339	207mm	1	Float glass, pre-lapped parallel.

All substrates are 6mm thick, apart from OCON-335 and OCON-339 which are 8mm thick.  
Maximum parallelism error is 6 microns over a 160mm diameter, 4 microns over a 112 / 105mm diameter or 3 microns over a 75 / 83mm diameter.



# GLASS MICROSCOPE SLIDES & COVERSIPS

Logitech slides and coverslips meet optical qualities such as flatness, planarity, homogeneity, refractive index and dispersive power to the most exacting industry standards.

## Glass Coverslips

Logitech Glass Coverslips protect valuable thin sections and improve optical clarity for transmitted microscopy.

These slide coverslips are specially designed to give high resistance to fogging and microscope mould - even under extreme weather conditions.

Manufactured under close control during all stages of production, the slides thickness conforms to the standard microscope coverslip thickness of 0.170mm.

Code	Size	Pack size	Description
OCON-156	24 x 44mm	100	High quality glass produced to exacting standards
OCON-161	25 x 75mm	100	
OCON-157	26 x 46mm	100	
OCON-159	49 x 74 mm	100	
OCON-160	74 x 108mm	100	

## Glass Microscope Slides

Logitech Glass Microscope Slides are used for the permanent mounting of thin rock, concrete and soil thin sections.

These microscope slides are manufactured to stringent production quality control procedures, ensuring flatness and the elimination of bubbles, seeds, striae and other imperfections. Comprised of high

quality sheet glass to give maximum resistance to corrosion, the microscope slides also benefit the user with sand blasted edges for greater safety and ease of handling.

Code	Slide size	Quantity	Thickness	Comment
OCON-150	26 x 46mm	100	1.2 - 1.5mm	High quality glass microscope slides, RI 1.54, finished edges. Highest quality materials are used, suitable for the most stringent of applications.
OCON-152	26 x 76mm	100	1.2 - 1.5mm	
OCON-145	27 x 46mm	100	1.2 - 1.5mm	
OCON-151	28 x 48mm	100	1.2 - 1.5mm	
OCON-102	30 x 45mm	100	1.6mm	
OCON-148	30 x 46mm	100	1.2 - 1.5mm	
OCON-153	51 x 76mm	100	1.2 - 1.5mm	
OCON-053	51 x 76mm	100	2mm	
OCON-154	76 x 110mm	100	1.2 - 1.5mm	
OCON-155	102 x 152mm	100	1.2 - 1.5mm	

# ULTRA FINE ALUMINIUM OXIDE & CERIUM OXIDE POWDERS

Logitech powders are manufactured to comply with the exacting standards required for precision lapping and optical polishing abrasives. Suitable for processing a wide variety of materials including semiconductors, precision optics and metallographic micro sections.



## Ultra Fine Aluminium Oxide Polishing Powders

Logitech Ultra Fine Aluminium Oxide Polishing Powders are sub-micron powders produced in a special process using the calcination of alum. They are chemically inert, fast cutting abrasives, suitable for a wide variety of lapping / polishing plate types. All three types can be used in suspension, slurry or paste form by mixing with water.

Materials processing applications for Ultra Fine Aluminium Oxide Powders include:

- Optical Components
- Ferrite Components
- Plastics
- Metallographic Micro Sections
- Ceramics
- Electro-Optic Materials
- Semiconductor Wafers

Product Data	
Product Type:	Aluminium Oxide Powder
Colour:	White, tan or grey powder
Odour:	None
Percentage content:	95-99%
Boiling point:	2980 °C
Melting point:	2045 °C
Solubility:	Insoluble in water and solvents

Code	Micron size	Pack Size	Description
OCON-014	0.05	2 kg	Gamma alumina: The least aggressive of the ultra fine aluminas due to the extremely small crystal size. Used for the final surface polish of a wide variety of materials.
OCON-015	0.3	2 kg	Alpha alumina: Rapid cut, produces smooth, mirror like finish on metal composites and ceramic surfaces. Used as a pre-polish on many surfaces or a final polish on optical materials.
OCON-016	1.0	2 kg	Alpha alumina: Provides an aggressive cutting action, and is often used for the initial surface preparation stages prior to processing with 0.3 or 0.05 micron aluminas.

## Cerium Oxide Polishing Powders

Cerium Oxide Polishing Powders are rare earth polishing media, formulated for the final polishing of materials to "optical" polishing standards. Suitable for use with pitch and polyurethane polishing plates and a wide variety of polishing cloths, these powders offer the highest quality performance and uniform surface finish on a wide range of glasses and electro-optic materials.

Product Data	
Product Type:	Cerium Oxide Powder
Colour:	Cream
Bulk Density:	1.7 ±0.2 grams/cc
Mean Particle Size:	3.0 microns ±1

Code	Micron size	Pack Size	Description
OCON-260	0.5	1 kg	Opaline grade for high quality finishing of optical and electro-optical components.
OCON-023	3	1 kg	CC2 grade for optical polishing of standard optical and electro-optical components.





# DIAMOND POLISHING POWDERS

Particularly useful for polishing small rock specimens, minerals, thin sections and metallic ores where specific lubricant carriers are required.

## Diamond Polishing Powders

Logitech Diamond Polishing Powders offer the ultimate in quality and economy of operation and can be used with a wide variety of soft metal polishing plates and polishing cloths. Mix with polishing carrier fluids (page 10).

Polycrystalline particles breaks down more readily than their monocrystalline counterparts, resulting in more crystal facets being revealed. This, in turn, produces a faster polishing process due to the sharper edges.

Applications include:

- Geological Specimens
- Laser Rods
- Silicon Carbide
- Sapphire/Gallium Nitride
- Metals
- CVD Diamond

Product Data

Product Type:	Diamond
Colour:	White
Specific gravity:	3.513
Soluble:	No

Code	Micron size	Pack size (gms)	Type	Description
0CON-276	1	4	Synthetic Monocrystalline	Economic choice for thin section polishing. Finest polish finish.
0CON-277	3	4	Synthetic Monocrystalline	Economic choice for thin section polishing. Fine polish finish.
0CON-278	6	4	Synthetic Monocrystalline	Economic choice for thin section polishing. Rapid stock removal.
0CON-279	1	4	Synthetic Polycrystalline	Polycrystalline diamond is more efficient for polishing. Finest polish finish.
0CON-280	3	4	Synthetic Polycrystalline	Polycrystalline diamond is more efficient for polishing. Fine polish finish.
0CON-281	6	4	Synthetic Polycrystalline	Polycrystalline diamond is more efficient for polishing. Rapid stock removal.
0CON-282	50	20	Natural Monocrystalline	Lapping of ultra hard ceramics and CVD diamond films.
0CON-322	25	20	Natural Monocrystalline	Lapping of sapphire substrates.
0CON-325	15	20	Natural	Lapping of sapphire substrates.
0CON-328	9	20	Natural	Lapping of sapphire substrates.

## Diamond Suspensions

Logitech Diamond Suspensions are high performance, water based diamond suspensions containing exclusively polycrystalline diamonds. Polycrystalline diamonds are used to provide the highest quality preparation, faster removal rates, and a finer finished

surface. They are stable and retains their properties from the beginning of the preparation to the very end. They offer very good material removal and do not settle or clog the dosing system.

Code	Micron size	Pack size	Description
0CON-315	1	500ml	Contains high quality polycrystalline diamonds. Alcohol free. Constant suspension.
0CON-314	3	500ml	
0CON-313	5	500ml	
0CON-317	15	500ml	

# MOUNTING MEDIA

- Epoxy Resins for sample impregnation and permanent bonding applications, such as thin sectioning.
- UV Resins for fast curing.
- A range of bonding waxes for low / high temperature mounting and aggressive chemical environments.
- Thermoplastic coverslip mounting media and bonding resins.



## Temporary & Permanent Mounting Adhesives

Code	Type	Pack size	Bond Type	Description
0CON-185	Epoxy Pack 301	454 g	Permanent	2 part epoxy resin, RI 1.54. Suitable for a wide range of mounting and impregnation applications including thin rock section bonding.
0CON-185-10	Epoxy Pack 301	4.5kg	Permanent	2 part epoxy resin, RI 1.54. Suitable for a wide range of mounting and impregnation applications including thin rock section bonding.
0CON-186	UV Resin	50ml	Temporary	Ultraviolet light curing urethane acrylic resin. Suitable for temporary, controlled thickness bonding applications.
0CON-193	Wax	4 ingots	Temporary	Thin Film Bonding Wax, 50-55 °C melting point, is ideal for holding substrates in place during slicing, dicing,
0CON-199	Wax	454 g	Temporary	Plasticised General Bonding Wax. Melting point 57 - 59 °C. Suitable for a wide range of temporary specimen bonding applications.
0CON-200	Wax	454 g	Temporary	Quartz Wax, melting point 66 - 69 °C. Particularly suited to electro-optic and optical materials bonding / mounting applications.
0CON-286	Wax	6 oz	Temporary	Wax Cement, melting point 110 - 120 °C. Suitable for bonding in ceramics and semiconductor applications.
0CON-287	Mounting Resin	1 kg	Permanent	Araldite Mounting Resin. Suitable for mounting a wide range of samples in Logitech Annular Saws. For use with Araldite Mounting Hardener.
0CON-288	Mounting Hardener	0.25 kg	Permanent	Araldite Mounting Hardener. For use with Araldite Mounting Resin.
0CON-307	Epoxy	0.3 kg each	Permanent	Araldite 2011 epoxy mounting resin and hardener. For mounting during sawing applications.
0CON-324	Wax	454 g	Temporary	Glycol Phthalate. Suitable for bonding semiconductor wafers where high shear strength is required. 71 °C softening point, becomes fluid at around 122 °C.

## Cleaning Fluids & Powders

Code	Type	Pack size	Description
0CON-178	Ecoclear	3.785 litres	Non-solvent cleaning fluid. Suitable for most sample and substrate cleaning applications including demounting ultra-thin semiconductor wafers.
0CON-177	Bonding Wax Cleaning Powder	5 litres	Non-solvent cleaning powder used as a heated diluted liquid in conjunction with 0CON-193 for demounting wafers from substrates.





# POLISHING CARRIER FLUIDS & POLISHING SUSPENSIONS

- Colloidal silica, sub-micron alumina and chemo-mechanical polishing suspensions.
- Alcohol, oil based fluids and extenders for use with water soluble materials.

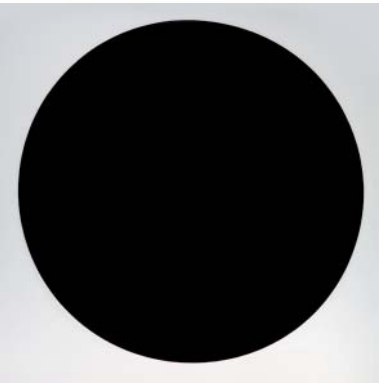
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Polishing Suspensions			
Logitech Polishing Suspensions have been developed to suit a wide range of polishing applications in the semiconductor and optoelectronic industries.		Both of these products produce polishes of the highest quality and are produced at our own purpose-built materials processing laboratories.	
Product Data		Product Data	
Product Type:	SF1 Polishing Fluid	Product Type:	Chemlox Polishing Fluid
Colour:	Opaque	Colour:	White Suspension
pH:	(At G/1 H <sub>2</sub> O) 9.2-10.1	pH:	11.4
Boiling Point:	100 deg °C (212 °F)	Boiling Point:	100 deg °C (212 °F)
Typical Chemical Analysis (%)		Typical Chemical Analysis (%)	
Formaldehyde:	<1.0%	Sodium Hypochlorite:	7 - 8%
Ethylene Glycol:	4 - 5%	Aluminium Oxide:	8 - 10%
Amorphous Silica:	15 - 50%		
Code	Type	Quantity	Description
OCON-141	Chemlox	4 litres	Sodium hypochlorite based polishing fluid, with a high pH. Suitable for chemo-mechanical polishing of GaAs, InP and similar semiconductors.
OCON-140	SF1	5 litres	Alkaline colloidal silica. Suitable for polishing silicon wafers and a wide range of optical / electro-optical components.
OCON-137	SF1	25 litres	Alkaline colloidal silica. Suitable for polishing silicon wafers and a wide range of optical / electro-optical components.

Polishing Carrier Fluids			
Logitech Ethane Diol contains excellent properties to assist the polishing process of water soluble materials. Ethane Diol is an effective slurry carrier with many powders including diamond, silicon carbide and aluminium oxide.		Product Data	
		Product:	Logitech Ethane Diol
		Colour:	Colourless viscous liquid
		Gravity:	1.11
		Boiling Point:	197 deg °C (386 °F)
		Freezing Point:	-12.3 deg °C (9.86 °F)
Code	Pack Size	Description	
OCON-128	5 litres	Oil based Suspension Fluid. Used in conjunction with Diamond Powder for geological thin section applications.	
OCON-133	5 litres	Ethane Diol. For use with silicon carbide and aluminium oxide powders when processing water soluble materials.	
OCON-134	5 litres	Ethane Diol Plus. Has a higher purity than standard ethane diol and contains a reduced (1%) water content for use with water soluble materials.	
OCON-135	5 litres	K-43 Polishing Fluid. Suitable for use with diamond or aluminium oxide powders when polishing water soluble materials and IR materials.	

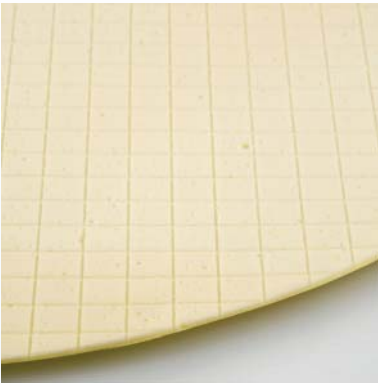
# CHEMCLOTH POLISHING CLOTHS

Suitable for final polishing of delicate semiconductor materials, such as Gallium Arsenide, with Chemlox Polishing Fluid.



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Chemcloth Polishing Cloths				
Logitech Chemcloth Polishing Cloths are designed to satisfy the exacting requirements of Chemical Mechanical Polishing (CMP). The black napped urethane surface layer is intrinsic to the substrate giving superior nap strength and longer pad life.			Chemcloth is ideally suited to a variety of polishing processes including:	
Chemcloth Polishing Cloths are supplied with a protected self-adhesive backing and each pack is hermetically sealed in a polythene sachet.			<ul style="list-style-type: none"><li>• Production polishing due to of the cloth's superior wear resistance and subsequent long life.</li><li>• Finishing under corrosive acid and alkaline conditions because of its' ability to produce perfect polishes in less time.</li><li>• High speed polishing operations because of its' superior nap strength.</li></ul>	
Code	Diameter	Pack size	Machine Compatability	Description
OCON-350	8" / 200mm	10	Compact 50 System	Our Chemcloth (CC1) pads are polyurethane based and incorporate a vertically oriented pore structure with a compressible substrate which is designed to instantly recover from compression and thereby enhances slurry flow. This reduces pad loading and increases pad life.
OCON-352	12" / 300mm	10	PM5	
OCON-353	14" / 350mm	10	LP50 & CP3000	
OCON-471	16" / 400mm	10	Tribo	
OCON-354	18" / 450mm	10	For use with CP4000	These pads are suitable for polishing delicate semiconductor materials, such as Gallium Arsenide with Chemlox Polishing Fluid.
OCON-356	20" / 508mm	10	For use with CDP	All Logitech polishing cloths are supplied in self adhesive backed form.
OCON-355	22" / 560mm	10	For use with DP1/DH300	
OCON-357	24" / 600mm	10	Orbis	
OCON-358	28" / 700mm	10	DP4	



# POLISHING CLOTHS & PADS

The Logitech range of polishing cloths provides a comprehensive selection of materials for fine surface polishing of the widest range of sample types.

Cloths are chosen because of texture, and for their capability to retain abrasive on the cloth surface in an efficient and economic manner. This ensures that samples are produced to the highest quality of surface finish while obtaining the best possible surface flatness.

## Chemical Mechanical Polishing (CMP) Cloths & Pads

Logitech Chemical Mechanical Polishing (CMP) cloths are manufactured specifically for CMP processes and are used on various systems including the PM5, LP50, Tribo and Orbis.

Code	Diameter	Pack Size	Type	Description
OCON-399	12"/300mm	5	EP1-P	<b>EP1</b> The EP1 has a foamed elastomer structure with controlled cells. Its unique structure and high hardness improves planarity and is designed for optimum polishing of Silicon, Sapphire and optical materials. Excellent Flatness control. Shore A hardness 97.
OCON-398	12"/300mm	5	EP1-G	
OCON-387	12"/300mm	5	EP2-P	
OCON-386	12"/300mm	5	EP2-G	
OCON-401	14"/350mm	5	EP1-P	
OCON-400	14"/350mm	5	EP1-G	
OCON-389	14"/350mm	5	EP2-P	
OCON-388	14"/350mm	5	EP2-G	
OCON-481	16"/400mm	1	EP1-P	
OCON-482	16"/400mm	1	EP1-G	
OCON-483	16"/400mm	1	EP2-P	<b>EP2</b> The EP2 has a micro-cellular structure that enables it to act in a "sponge like" manner, while maintaining the hardness and flatness. Pads are supplied with a pressure sensitive adhesive backing, excellent flatness control and fast polishing. Shore A hardness 86.
OCON-484	16"/400mm	1	EP2-G	
OCON-377	20"/508mm	1	EP1-P	
OCON-367	20"/508mm	1	EP1-G	
OCON-370	22"/550mm	1	EP1-G	
OCON-385	22"/550mm	1	EP2-G	
OCON-487	24"/600mm	1	EP1-P	
OCON-488	24"/600mm	1	EP1-G	
OCON-489	24"/600mm	1	EP2-P	
OCON-490	24"/600mm	1	EP2-G	
OCON-392	28"/700mm	1	EP1-G	<b>P</b> (Plain) - Designed for surfaces less than 20cm <sup>2</sup> <b>G</b> (Grooved) - Designed for surfaces greater than 20cm <sup>2</sup>
OCON-393	28"/700mm	1	EP2-G	

# POLISHING CLOTHS & PADS

Perfect for delivering optimal removal rates, with low global non-uniformity & defects.



## Chemical Mechanical Polishing (CMP) Cloths & Pads

These cloths are suitable for various CMP applications, (e.g. oxide, nitride and copper). They have an open pore structure with various urethane compression selectibility compositions. They are ideal for low to medium pressure applications.

Code	Diameter	Pack Size	Machine Compatability	Pad Hardness	Type	Description
OCON-360	8"/200mm	10	Compact 50	Shore A - 92	GC	<b>Suba IV (SBIV)</b> Suba IV pads feature an open pore structure and a less aggressive urethane composition than other pads. They are ideal for low to medium pressure applications with fragile crystals or delicate surfaces. Often used as a base pad in conjunction with a IC1000 pad.
OCON-361	10"/250mm	10	Compact 50	Shore A - 92	GC	
OCON-362	12"/300mm	10	PM5	Shore A - 92	GC	
OCON-342	12"/300mm	5	PM5	Shore D - 57	IC1000	
OCON-363	14"/350mm	10	LP50/CP3000	Shore A - 92	GC	
OCON-343	14"/350mm	5	LP50	Shore A - 67	SBIV	<b>Suba X (SBX)</b> Suba X is a denser, harder pad with a smaller pore structure than our Suba IV pad. It is often used for polishing glass, quartz or ceramics with consistent, reproducible results.
OCON-323	14"/350mm	5	LP50	Shore A - 68	SBX	
OCON-474	16"/400mm	1	Tribo	Shore D - 57	IC1000	
OCON-473	16"/400mm	1	Tribo	Shore A - 67	SBIV	
OCON-472	16"/400mm	1	Tribo	Shore A - 68	SBX	
OCON-364	18"/450mm	10	CP4000	Shore A - 92	GC	<b>IC1000</b> The IC1000 pad is made of rigid, microporous polyurethane. This allows it to planarize across wide gaps, providing excellent removal rates and localised uniformity. The small pore structure works with slurries to minimize scratching and provide optimum polishing performance.
OCON-381	20"/500mm	1	CDP	Shore D - 57	IC1000	
OCON-382	20"/500mm	1	CDP	Shore A - 67	SBIV	
OCON-365	22"/550mm	10	DP1	Shore A - 92	GC	
OCON-479	24"/600mm	1	Orbis	Shore D - 57	IC1000	
OCON-478	24"/600mm	1	Orbis	Shore A - 67	SBIV	<b>Geochem (GC)</b> The Geochem cloth is firm, dense and non-woven polishing cloth with absorbent fibres, providing a high level of flatness. This cloth is often used with a diamond slurry for polishing geological samples or chemical polishing of III-V semiconductor materials. Shore A hardness 92.
OCON-477	24"/600mm	1	Orbis	Shore A - 68	SBX	
OCON-383	28"/700mm	1	CDP	Shore A - 67	SBIV	

**P** (Plain) - Designed for surfaces less than 20cm<sup>2</sup>  
**G** (Grooved) - Designed for surfaces greater than 20cm<sup>2</sup>