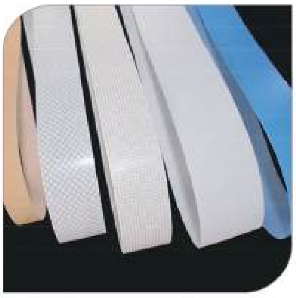
ENG

GRISH®



" Total Solution for Your Polishing Requirements "

Beijing Grish Hitech Co., Ltd.

GRISH group always adheres to the business philosophy which is "pursuing the material and spiritual happiness of all employees while contributing to the progress and development of human society". The company is people-oriented, giving full opportunity to its employees to show the talents and skills, striving to create more values for customers, and realizing the coordinated development of individual employee, enterprises, customers and societies.

Just like toothpastes and cosmetics products that make people more beautiful, the precision grinding and polishing materials developed and produced by GRISH company can be used to improve the surface accuracy and beauty of various high-precision parts, hence GRISH products become the favorite of many customers.

New voyage calls for new passion and new mission contains new hope. We always comply with the development and processing needs of various industries, constantly create new technologies, products, develop various processes and entire polishing solutions in order to support customers' development and success.

Katsu heiko

Katsu Heiko
President of Beijing Grish Hitech Co., Ltd.

GRISH®

Table of Content

Company Introduction	Company Basic Information & Company History		1
	Subsidiaries, Oversea Customers & Distributors		2
Application and Product	Products by Application		3
	Applications by Product		5
Product Introduction	Polishing Film	Lapping Film	6
		Ultra Fine Polishing Tape	8
		Microfinishing Film Roll	9
		CF Polishing Tape	10
		Diamond-bead Polishing Tape	11
		Flocked-pile Polishing Film	12
		Cleaning Roller	13
		3D Structured Film	14
		Lapping Plate	15
	Polishing Powder	Detonation Polycrystalline Diamond Powder	16
		Monocrystalline Diamond Powder	17
		Rough-surface Monocrystalline Diamond Powder	18
		Detonation Nano Diamond Powder	19
		Ultra Fine Polishing Powder	20
		Diamond-bead Powder	21
		Spherical Diamond Powder	22
	Polishing Liquid	PCD Diamond Polishing Slurry	23
		MD & RCD Diamond Polishing Slurry	24
		Diamond-bead Polishing Slurry	25
		CO/AO/SC Polishing Slurry	26
		CMP Slurry	27
		High-efficiency CMP Slurry	28
		High-efficienct Lapping Agent	29
		Lubricants & Dispersants (Base Liquid)	30
		Polishing Oil	31
	Pad	Polishing Pad	32
	Dental Consumables	Dental Polishing Strip & Disk	33
		Diamond Polisher Kit	34
	Compound	Diamond Compound	35
	Waxing & Dewaxing	Solid Wax	36
		Liquid Wax	37
		Dewax Liquid	38
	Equipment & Accessories	Polishing equipment & Accessories	39
Micron (um) and Mesh Conversion			40

Company Basic Information

Name	Beijing Grish Hitech Co., Ltd.
Founded	June 2001
CEO	Katsu Heiko
Address	Rm 402, Block C, Zhongguancun Development Building, No. 12, Shangdi information Rd., Haidian District, Beijing, China 100085
Business	1. Manufacture and sale of the polishing materials, Polishing machines and tools etc. 2. Research and Develop satisfied products upon the customers' request. 3. Provide complete polishing solution to the customers.

Company History

2001	Beijing Grish established.
2002	Lapping film diamond series was developed.
2005	Fangshan plant and R&D center founded.
2007	ISO9001, ISO14001, OHSAS18001 Certified.
2008	Polycrystalline diamond project developed.
2011	Electrostatic line went into production.
2012	Yanshan plant went into production.
2015	Acquiring Japan Company Summit.
2017	Panjin plant went into production.
2018	Polishing machine plant went into production.
2019	Solid Wax and Dental Polishing Products developed.
2020	Successfully developed compound semiconductor grinding and polishing solutions.
2021	Grish Co-edited industry standards was published.
2022	Beijing Grish Medical Co., Ltd. was founded.

Subsidiaries

Headquarter
Beijing, China

Factories
Beijing, Panjin

Osaka Branch
Summit, Japan

Oversea Customers & Distributors

Products by Application

Optical Communication

Lapping Film

Flocked-pile Polishing Film

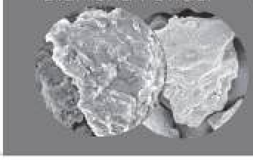
SC/AO/CO Polishing Slurry

Polishing Pad

Fiber Polisher & Polishing Jig

Sapphire & SiC Wafer & Optical Window

PCD & RCD Diamond Powder



Diamond Polishing Slurry

CMP Slurry

Wax & Dewax Liquid

High-efficient Lapping Agent

Metal Parts & Die & Metallography polishing

Lapping Film

Microfinishing Film Roll

CMP Slurry

Diamond Compound

Diamond Polishing Slurry

LCD Panel & CF

Flocked-pile Polishing Film

3D Structured Film

Grooved Lapping Film

LCD Panel Polishing Fabric

CF Ultra-fine Polishing Tape

Cleaning Rollers

Electronics

Lapping Film

Flocked-pile Polishing Film

3D Structured Film

Polishing Slurry

Automobile

Microfinishing Film Roll

Scalloped-edge Microfinishing Film Roll

Polishing Machine

Dental

Diamond Polisher

Dental Polishing Strip & Disk

Products by Application

Optical Glass & Crystal


Lapping Film


Diamond Powder


Polishing Slurry


Wax & Dewax Liquid


High-efficient Lapping Agent

Semiconductor Materials


Diamond Powder

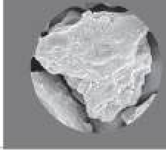

Diamond Polishing Slurry


CMP Slurry


Lubricants/Dispersants (Base Liquid)


Wax & Dewax Liquid

Ceramics & Bearing


Diamond Powder


Diamond Polishing Slurry


Diamond Compound

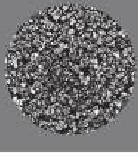

CMP Slurry


High-efficient Lapping Agent

Hard Disk · Magnetic head


Lapping Film


Burnish Tape


PND Powder


SC/AO/CO Polishing Slurry


CMP Slurry

Roller


Ultra Fine Polishing Tape


Microfinishing Film Roll

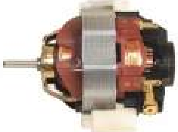

Flocked-pile Polishing Film

AIN Submount


Polishing Slurry


Polishing Pad

Micromotor




Ultra Fine Polishing Tape

Applications by Product

	Optical Communication	Sapphire and SiC Wafer	Automobile	Electronics	Hard Alloy	LCD Panel \CF	Dental	Micro Motor	Roller	Optical Glass & Crystal	Semiconductor	Aluminum Nitride	Hard Disk · Magnetic	Ceramic	Metallography Analysis
Lapping Film	●			●	●				●	●	●		●		●
Ultra Fine Polishing Tape						●		●	●				●		
Microfinishing Film Roll			●		●				●						
CF Polishing Tape						●					●				
Diamond-bead Polishing Tape	●										●		●		
Flocked-pile Polishing Film	●			●		●			●						●
Cleaning Roller						●									
3D Structured Film				●		●									
Lapping Plate						●									
Scalloped-edge Microfinishing film Roll			●												
Grooved Lapping Film						●									
Detonation Polycrystalline Diamond Powder		●								●	●			●	
Monocrystalline Diamond Powder			●								●			●	
Rough-surface Monocrystalline Diamond Powder		●								●	●			●	
Detonation Nano Diamond Powder										●	●			●	
Ultra Fine Polishing Powder	●									●					
PND Powder												●			
Spherical Diamond Powder		●								●	●				
Diamond-bead powder	●										●		●		
PCD Diamond Polishing Slurry		●		●						●		●		●	
MD & RCD Polishing Slurry		●		●						●		●		●	●
Diamond-bead Polishing Slurry		●		●						●				●	
CO/AO/SC Polishing Slurry	●			●						●		●	●		●
CMP Slurry		●		●	●						●	●	●	●	●
High-efficient CMP Slurry											●				
High-efficient Lapping Agent		●								●				●	
Lubricants & Dispersants (Base Liquid)		●			●					●					
Polishing Oil	●														
Polishing Pad												●			●
Diamond Compound					●									●	●
Diamond Polisher Kit							●								
Dental Polishing Strip & Disk							●								
Solid Wax		●								●					
Liquid Wax		●								●					
Dewax Liquid		●								●					
Polisher	●		●												

Lapping Film

GRISH Lapping Film / Polishing Film is coated with- precisely graded minerals (such as diamond, aluminum oxide, silicon carbide, silicon oxide, cerium oxide and so on) on the high strength PET film to provide a uniform, consistent finish. with or without PSA (Pressure Sensitive Adhesive) backing and available in sheets, discs and rolls for meeting the use on any type of polishing equipment. These films are widely used in the polishing of fiber optic-connectors, roller, hard disk and metal parts etc.

Specification

Abrasive Grit Size	Diamond (D)	Silicon Carbide (SC)	Aluminum Oxide (AO)	Silicon Oxide (SO)	Cerium Oxide (CO)
80µm #180	●				
60µm #240	●				
45µm #360	●				
40µm #400	●		●		
30µm #600	●	●	●		
20µm #800			●		
16µm #1000	●	●	●		
15µm #1200	●	●	●		
12µm #1500			●		
9µm #2000	●	●	●		
6µm #2500	●				
5µm #3000		●	●		
3µm #4000	●	●	●		
2µm #6000	●		●		
1µm #8000	●	●	●		
0.5µm #10000	●		●		
0.3µm #15000			●		●
0.01µm				●	
Standard Size	Round: Φ70mm, Φ110mm, Φ127mm (5in), Φ203mm (8in) Rectangle: 114mm*114mm, 152mm*152mm (6in*6in), 228mm*280mm (9in*11in)				

Remark: Customizations are available upon requests.

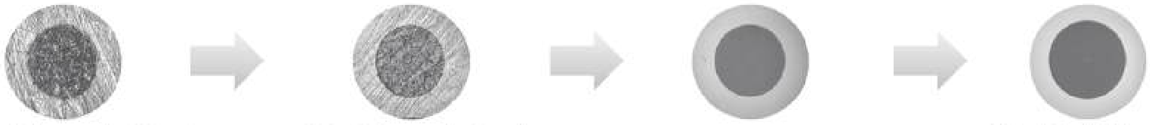
Continue

Applications

Product series	Application and explanation
D (Diamond)	Lapping for fiber optic connector, fiber array and glass pig tail (angle removal, rough grinding, medium polishing and fine polishing).
	Polishing for magnetic heads and hard disks.
	Lapping and polishing for optical glasses, optical crystal and LED.
	Lapping and polishing for semiconductor wafer (gallium arsenide, indium phosphide etc.)
	Edge polishing for silicon wafer.
SC (Silicon Carbide)	Epoxy and glass removal.
	Lapping and polishing for plastic ferrules.
	Fine finishing and polishing for magnetic heads.
AO (Aluminum Oxide)	Polishing for fiber optic connector.
	Polishing for silicon wafer used in solar cells.
	Polishing for hard disks.
	Polishing for ITO.
	Lapping and polishing for optical crystal.
SO (Silicon Oxide)	The final super-precise polishing of fiber optic connector.
CO (Cerium Oxide)	The final polishing for fiber optic connectors.
	Polishing for optical devices.

◆ Fiber Optic Connector Polishing

Recommended polishing process: D30, D9, D1 and final polishing.
Below is good end-face pictures in 400 times magnification for each polishing step:


D30 (Diamond 30μm)
D9 (Diamond 9μm)
D1 (Diamond 1μm)
Final Polishing Film

◆ MTP/MPO connector

◆ Hard disk

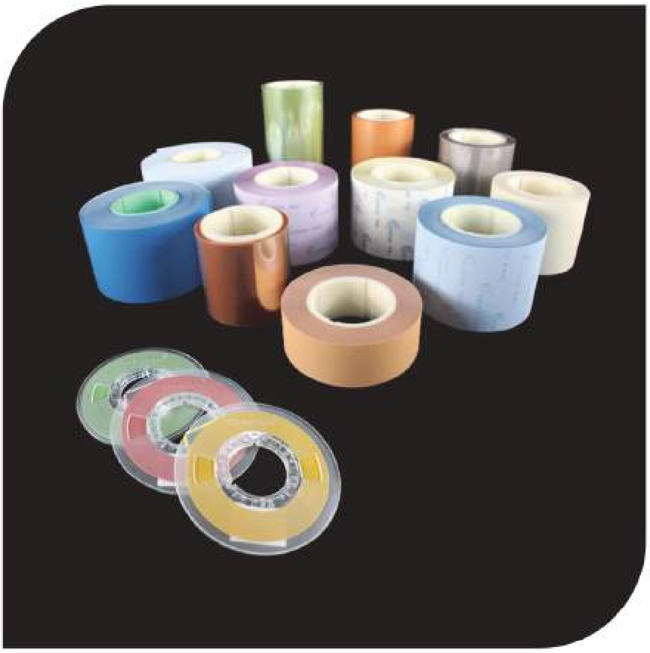
◆ Hard alloy

◆ Metallography polishing

Features

- ◆ Superior finish surface.
- ◆ Consistent polishing performance.
- ◆ Long life and highyield.
- ◆ Applicable to both dry and wet polishing.

Ultra Fine Polishing Tape



GRISH Ultra Fine Polishing Tape is coated with precisely graded minerals on the high strength PET film. You can achieve consistent, predictable finishing, faster and easier than traditional methods, it help to increase your productivity and reduce your costs. It is widely used for the polishing of hard materials such as carbide, ceramics, hard metals, alloys and composites.

Specification

Abrasive Grit Size	Diamond (D)	Silicon Carbide (SC)	Aluminum Oxide (AO)
80μm #180	●		
60μm #240	●		
45μm #360	●		
40μm #400	●		●
30μm #600	●	●	●
20μm #800			●
16μm #1000	●		●
15μm #1200	●	●	●
12μm #1500			●
9μm #2000	●	●	●
6μm #2500	●		
5μm #3000		●	●
3μm #4000	●	●	●
2μm #6000	●		●
1μm #8000	●	●	●
0.5μm #10000	●		●
0.3μm #15000			●
Width	1.2mm, 1.6mm, 2.0mm, 2.5mm 3.0mm, 3.2mm, 3.8mm, 5.0mm, 12.6mm, 101.6mm		
Length	45m (150 feet), 100m, 183m (600 feet), 200m		

Remark: Customizations are available upon requests.

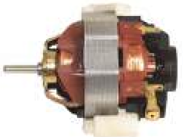
Features

- Superior finish surface with high removal rate.
- Consistent polishing performance.
- Good flexibility to fit to curved surface.
- Applicable to both dry and wet polishing.

Applications

- Semiconductor materials

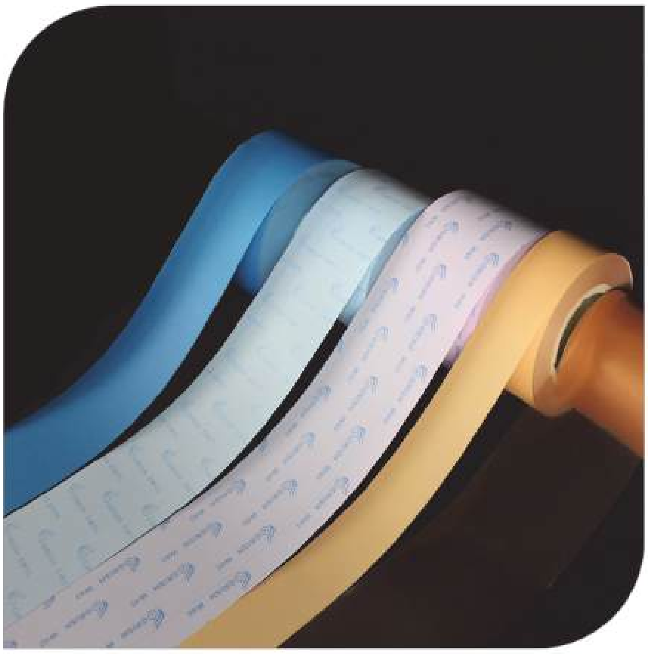
- Micromotor



- Industrial roller

- LCD panel

- Hard disk



Microfinishing Film Roll

GRISH Microfinishing Film is produced by coating the abrasive grains uniformly on the high strength PET film, which can provide high efficiency and achieve mirror finishing result.

Available abrasive materials are aluminum oxide, silicon carbide and diamond etc. to meet different hardness of work-piece finishing requirements.

Specification

Abrasive / Grit Size	Silicon Carbide (SC)	Aluminum Oxide (AO)	Diamond (D)
125μm #120		●	●
100μm #150		●	
80μm #180	●	●	●
60μm #240	●	●	●
50μm #320		●	
40μm #360	●	●	●
30μm #600	●	●	●
20μm #800	●	●	●
15μm #1200	●	●	●
12μm #1500		●	
9μm #2000	●	●	●
PET (base) thickness	100μm(4mil)	125μm (5mil)	100μm(4mil)
Standard Size	200mm*15m, 101.6mm (4in)*46m, 100mm*15m, 112.6mm (1/2in)*46m		
Backing	Anti-slip, PSA, Velcro		

Remark: Customizations are available upon requests.

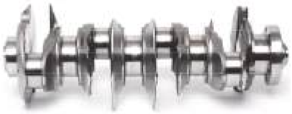
Applications

- Industrial roller
  - Rubber roller

  - Electroplating metal roller
  - Stainless steel roller

Recommended process with AO abrasive:
80μm>40μm>20μm>12μm

- Automotive
  - Crankshaft



  - Camshaft

  - Gear-shaft

Features

- High removal rate with well-plated abrasive grains.
- Easy scraping and less plug.
- Consistent finish performance with uniform PET backing and abrasive plated-upon.
- Long durability and good cost-performance for customers.

CF Polishing Tape

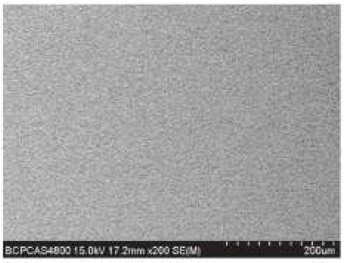
GRISH CF Polishing Tape is made by uniform coating of micron-graded aluminum oxide powder on high strength PET film. It is used to flatten the protrusion point and repair the defects effectively in LCD color filter process.

Specification

Abrasive Grit Size	Aluminum Oxide (AO)
1μm #8000	●
0.5μm #10000	●
0.3μm #15000	●
0.2μm #20000	●
PET (base) thickness	25μm(1mil), 50μm(2mil)
Width	3.8mm, 12.6mm
Length	50m, 100m

Remark: Customizations are available upon requests.

Product micrograph



Features

- Highly uniform coating surface and consistent thickness.
- Smooth and straight cutting edge.
- Good cleanliness.

Applications

- LCD Panel CF Repair
- Semiconductor

Diamond-bead Polishing Tape

GRISH Diamond-bead Polishing Tape is made from micron size diamond beads which consist of much smaller micron size diamond particles. It acts like a micron grinding stone during polishing process, and gives smooth polishing surface with high removal rate. During polishing process, the diamond beads break into smaller particles, which perform as polishing chain and provide consistent polishing and achieve longer life.

Specification

Abrasive	Diamond-bead Powder	product	Polishing Tape
Primary grit size	0.7μm，1.5μm	The product grit size	1μm，#8000
Aggregated grit size	22.0±2.0 μm		3μm，#4000
Base material thickness	75μm（3mil），50μm（2mil）customize，25μm（1mil）customize		
Standard Size	Sheet：114mm*114mm，152mm*152mm，228mm*228mm Disc：Φ70mm，Φ110mm，Φ127mm，Φ203mm Strip: the minimum width is 0.8mm，the tape length and the core size can be customized upon the customers' requirements.		

Remark: Customizations are available upon requests.

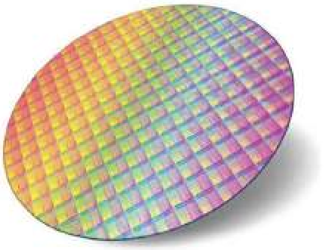
Features

- Consistent removal rate and long life.
- Scratches free and produces superior surface finish.

Applications

- Hard Disk Magnetic Head Polishing

- Semiconductor



- Fiber Optic Polishing

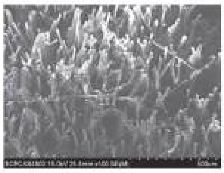
- Other precision process

Flocked-pile Polishing Film

GRISH Flocked Pile Polishing Film consists of micro or submicron size abrasive and new polymer material particles coated over the surface of every fiber pile. It has excellent buffering performance and good cleaning effect, and is widely used in the final polishing of rollers, surface cleaning of LCD panels. (especially suitable for panels with ITO wiring).

Specification

Abrasive / Grit Size	Aluminum Oxide (AO)	Aluminum Hydroxide (AOH)	Calcium Carbonate ($CaCO_3$)
20µm #800		●	●
1µm #8000	●		
0.5µm #10000	●		
Base material	Flocking composite		
Standard size	15mm*0.838m, 55mm*74mm, 101.6mm*23m 135mm*20m, 160mm*15m, 190mm*20m, 200mm*10m		



Remark:
1. Customizations are available upon requests.
2. We also have the flocked-pile without abrasive, such as PGZ-1, EF-5A.

Applications

- Stainless steel roller

- LCD panel

- Electroplating metal roller

- Crankshaft

- Fiber Optic Polishing

Features

- High wear resistance, uniform polishing and efficient cleaning.
- Good flexibility.
- Good antistatic performance.

Cleaning Roller

GRISH Cleaning Roller is made of unique high-strength elastic polymer composite material and functional grinding layer combined by special adhesive, the roller has outstanding anti-scratch effect and good cleaning yield, suitable for cleaning in the LCD panel process.

Specification

Product Name	Cleaning Roller
Abrasives	AO、AOH、$CaCO_3$
Size	Φ70mm*644mm 、Φ70mm*544mm (Customization are available upon request)

Remark: Customizations are available upon requests.

Applications

◆ LCD panel

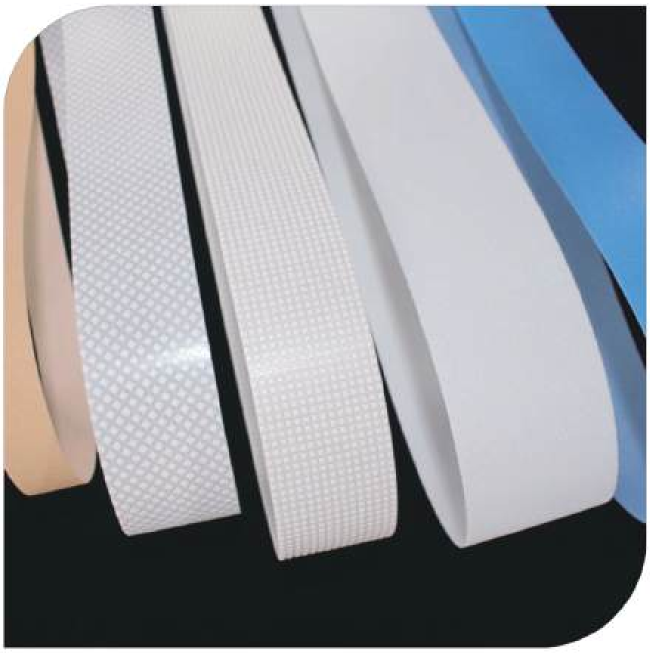
Grinding and cleaning of On-cell, ITO and OLED glass

Features

◆ **High Cleaning Yield:**
The product function grinding layer is flat and soft, combined with the design of the elastic buffer layer in the structure, delivering stable performance and high grinding yield during processes.

◆ **Nice Anti-scratch Effect:**
The grinding layer has a chip storage structure, and the product surface is designed with spiral open-loop grooves, which can effectively guide the chip discharge and effectively avoid scratching.

3D Structured Film



GRISH 3D Structured Films have reduplicative 3D patterns such as cubic, pyramid, prismatic, diamond pattern and so on. It contains fine abrasives inside patterns. These patterns have uniform height, and show consistent and durable polishing ability.

Specification

Abrasive Grit Size	Aluminum Oxide (AO)	Aluminum Hydroxide (AOH)	Cerium Oxide (CO)	Calcium Carbonate ($CaCO_3$)
45μm #360	●			
30μm #600	●			
15μm #1200	●			●
9μm #2000	●	●		●
5μm #3000	●	●		●
3μm #4000	●	●		
1μm #8000			●	
0.5μm #10000			●	
3D Structure	Pyramid, Square, Prismatic, Diamond			
Base material	PET			
Standard size	Polishing belt:15mm*838mm, 30mm*1600mm Grooved lapping film:55mm*74mm, 55mm*80mm, 55mm*100mm, 55mm*140mm			

Remark: Customizations are available upon requests.

Applications

- LCD panel

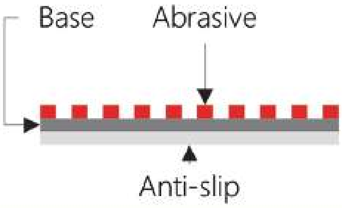
- Glass Scratches repair

- Car body paint repair

- Metal

Features

- Durable polishing performance with uniform abrasive module.
- Consistent removal rate with self-dressing characteristics.
- Discharge polishing debris through grooves among patterns.



Lapping Plate

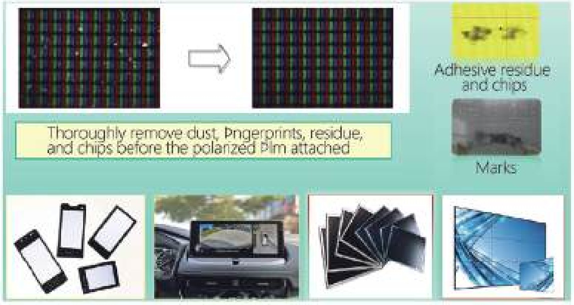
GRISH lapping plate has a concave-convex structure, obtained by applying precision abrasives on the substrate through gravure printing and micro-structure repetition technology. It is used for cleaning the panel before attaching the polarizer in the LCD manufacturing process. It has high grinding and cleaning ability and a long service life.

Specification

Product Name	Lapping plate for cleaning LCD panel
Composition	Grinding layer, buffer layer, mounting function layer
Abrasives	AO, AOH, $CaCO_3$
Regular Size	Φ150mm 、Φ300mm、Φ400mm (Customization is available)
Total Thickness	11±0.2mm、4.1±0.1mm (Depend on product type)

Applications

- ◆ LCD panel



It is used for cleaning the panel before attaching the polarizer, featuring high grinding efficiency, excellent cleaning ability and ideal service life.

Features

- ◆ Surface microstructure units are highly consistent, ensuring uniform grinding marks.
- ◆ The elastic buffer layer can effectively protect the glass panel and achieve a stable cleaning effect.
- ◆ Micro-units of the product have good self-sharpening properties, providing a continuous cleaning effect and effectively guaranteeing the product's service life.
- ◆ The product adopts a contact mode of points, lines, and surfaces, ensuring a high cleaning effect and effectively improving the cleaning yield.
- ◆ The composite adhesive system effectively avoids scratches on the panel during use and realizes the optimization of the cleaning effect.

Detonation Polycrystalline Diamond Powder

GRISH Detonation Polycrystalline Diamond Powder (PCD) is produced in a controlled explosion. Grains microscopic structure is similar with natural Carbonado.

Compared with monocrystalline diamond, PCD has more cutting edges, resulting in the higher removal rate, with good self-sharpening proprieties. The structure will always open new sharp edges introduced by releasing an outer layer of dull crystallites. The polycrystalline diamond can give higher removal rate and lowest level of scratches. That's why it is especially suitable for the high precision processing on super hard material.

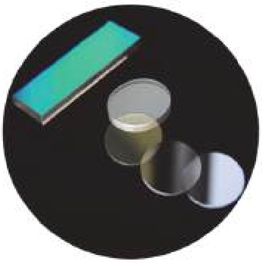
Specification

Model	Grade	D10 (μm)	D50 (μm)	D95 (μm)	Areas of use
PCD 1/8	Standard size	≥0.06	0.10-0.14	≤0.21	Surface polishing of optical crystal, ultra-hard ceramic, wafer substrate and metal.
PCD 1/4		≥0.11	0.20-0.25	≤0.40	
PCD 0-1		≥0.40	0.48-0.55	≤0.72	
PCD 0-2		≥0.70	0.90-1.10	≤1.50	
PCD 2-4		≥1.80	2.70-3.00	≤4.50	Lapping, rough polishing and back thinning of sapphire and SiC wafer substrate.
PCD 3-6		≥2.80	4.00-4.40	≤7.00	
PCD 4-8		≥4.00	5.50-6.00	≤8.60	
PCD 5-9		≥4.70	6.30-7.00	≤10.00	
PCD 5-12		≥5.20	7.20-7.80	≤13.00	
PCD G3	Precision size	≥2.00	2.80-3.10	≤4.40	
PCD G3.5		≥2.40	3.30-3.60	≤5.00	
PCD G4		≥2.90	3.90-4.20	≤6.00	

Remark: Customizations are available upon requests.

Applications

- Sapphire and SiC wafer



- Optical glass & crystal

- Ceramic and metal

Features

- Higher toughness and better self-sharpening properties compared with monocrystalline diamond.
- Higher removal rate, less scratches, more consistent polishing performance compared with monocrystalline diamond.
- High wear resistance and long service life.

Monocrystalline Diamond Powder

GRISH Monocrystalline Diamond Powder (MD) is made of high quality diamond through crushing, shaping, grading and other processes. Monocrystalline Diamond powder has sharp edge and high hardness. According to different strength, the MD Powder is divided into MBD and RVD series.

Specification

Model	D50 (μm)	Model	D50 (μm)
D 40-60	46±3	D 4-8	4.9±0.4
D 20-40	28±3	D 2-4	3.0±0.3
D10-20	15±2	D 1-3	1.6±0.2
D 6-10	8.4±0.5	D 0-2	1.1±0.2
D 5-9	7.4±0.4	D 0.5-1	0.7±0.1

Remark: Customizations are available upon requests.

Applications

- Hard material
  - Metal mold

  - Gemstone

  - Ceramic

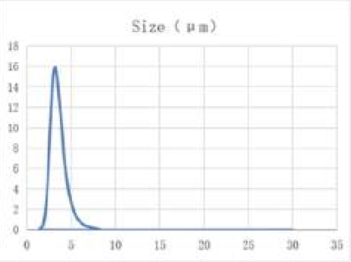
  - Optical glass & crystal

- Diamond grinding tools and wheels

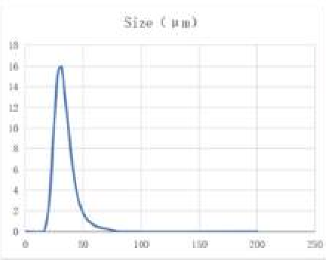
Features

- **Rich Variety**: MBD series products are gray to white in color and can be divided into A, B and C types according to their strength;
- **Low Scratches:** The color of RVD series products ranges from gray to gray-green, with good self-sharpening properties, it is unlikely to produce scratches;
- **Uniform Abrasives:** The product has massive crystal shape and concentrated particle size distribution to achieve consistent finish;
- **High Purity:** High product purity, impurity content less than 0.5%.

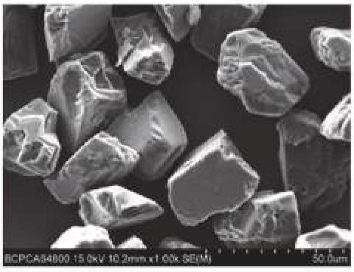
MBD-A Series



MBD-A 2-4

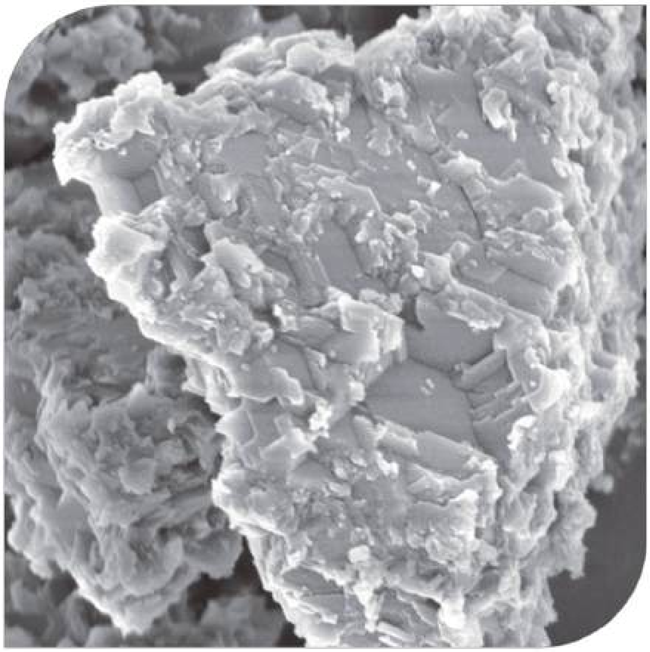


RVD 20-40



RVD Series

Rough-surface Monocrystalline Diamond Powder



GRISH Rough-surface Monocrystalline Diamond Powder, RCD for short, derived from monocrystalline diamond powder processed by a special technology. RCD Powder is more like polycrystalline diamond on performance.

Specification

Model	D10 (μm)	D50 (μm)	D95 (μm)
RCD 2-4	≥2.1	2.8~3.3	≤5.0
RCD 3-5	≥2.7	3.6~3.9	≤6.0
RCD 4-6	≥3.0	4.0~4.4	≤7.0
RCD 8-16	≥3.6	5.0~5.3	≤7.5
RCD 10-20	≥12.0	17.0~19.0	≤27.0

Remark: Customizations are available upon requests.

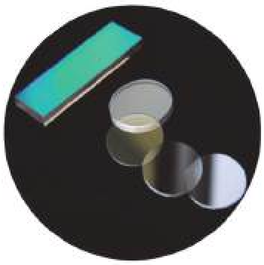
Features

- **Higher Removal Rate:**
  Compared with monocrystalline diamond powder, RCD powder has a rougher surface, and the abrasives fully contact with the workpiece, which can effectively improve the grinding efficiency.
- **Long Life:**
  Compared with monocrystalline diamond powder, RCD powder can maintain high grinding force and long lapping life.
- **Less Scratches:**
  There are a large number of small cutting chins on the abrasives, which can reduce surface roughness and avoid scratches.

Applications

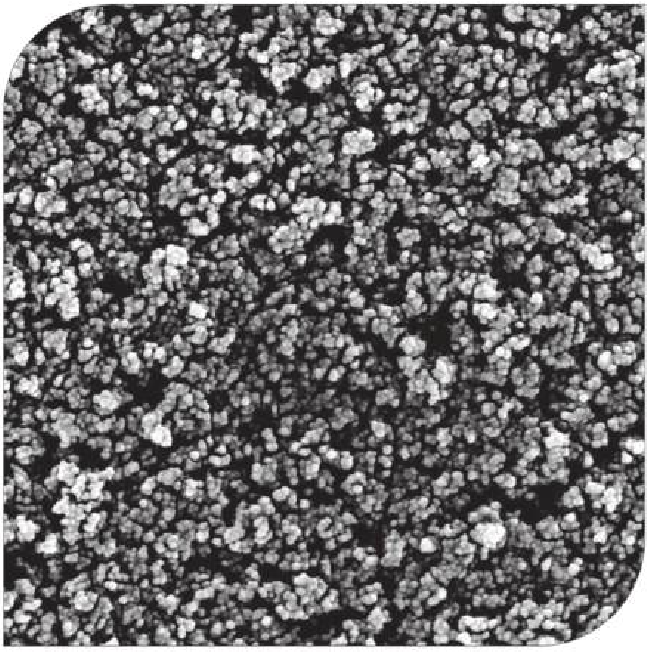
- Optical glass & crystal

- Sapphire and SiC wafer



- Hard material
  - Ceramic

  - Metal



Detonation Nano Diamond Powder

GRISH Detonation Nano Diamond Powder (DND) is also called Ultra Fine Diamond (UFD), which is made from the dissociative carbon in high pressure and temperature during detonation by oxygen negative explosive. It is different from the synthesized diamond, the shape of DND is sphere without sharp edges and the micro crystal size is about 4-7nm.

Specification

Model	Grit size (D50)	Impurity
DND-30	25-40nm	≤3%
DND-50	40-60nm	
DND-100	85-135nm	
DND-R	Unclassified product, microcrystal size 4~7nm	

Remark: Customizations are available upon requests.

Features

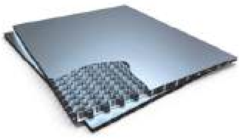
- Large Specific Surface Area:
  Small granularity of the product, specific surface area up to 300- 420m2/g.
- Good Dispersibility:
  Small particle size, in the dispersion medium, can maintain good dispersion and suspension, not easy to precipitate.
- High Processing Precision:
  Excellent ultra-fine polishing effect, can make the surface roughness of the workpiece reach below 0.2nm.

Applications

- Hard disk

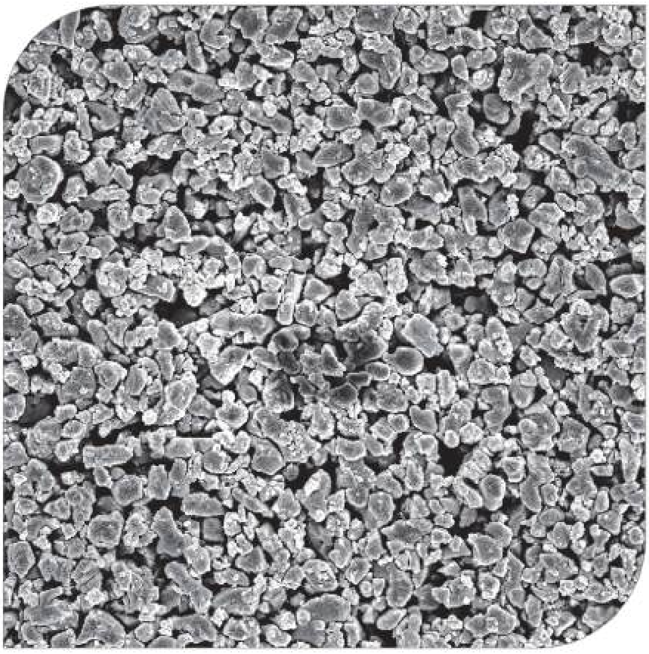
- Lubricant additives

- Supplement for composite materials



- Electroplated coating

Ultra Fine Polishing Powder



GRISH has three kinds of Ultra Fine Polishing Powders Silicon Carbide, Aluminum Oxide and Cerium Oxide. They are mostly used for the polishing of optical components, fiber optic parts, display panel, semiconductor substrate, hard disk and magnetic head etc.

Specification

Abrasive	Model	Grit size
Silicon Carbide (SC)	GC1000	13.5μm-16.5μm
	GC4000	3.0μm-3.8μm
	GC10000	0.3μm-0.7μm
Aluminum Oxide (AO)	AO10000	0.4μm-0.6μm
	AO15000	0.25μm-0.4μm
Cerium Oxide (CO)	CO	0.3μm-3.0μm

Remark: Customizations are available upon requests.

Features

- Fine particle size and adjustable polishing effectiveness can meet various polishing requirements.
- Sharp particle size distribution and good crystal shape can achieve precision polishing result in short time.
- High purity can meet the request from magnetic record materials like hard disk, and semiconductor materials like silicon and other high-tech fields.

Applications

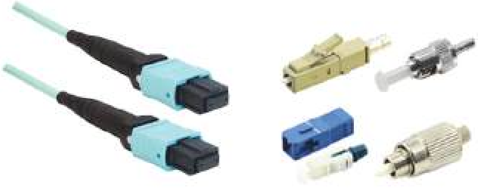
◆ Semiconductor

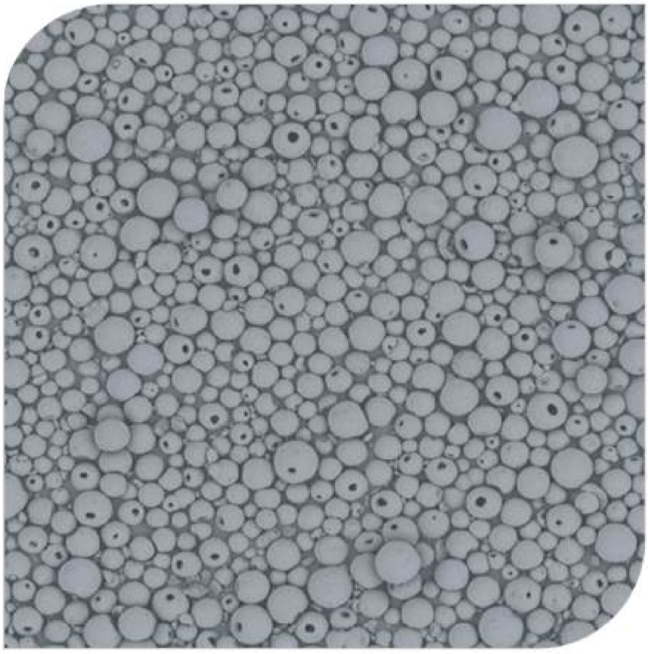
◆ Optical glass & crystal

◆ Hard disk

◆ LCD panel

◆ Optical communication





Diamond-bead Powder

GRISH Diamond-bead Powder is composed of micron sized diamond beads, and each bead is formed by much smaller micron sized diamond particles. During polishing process the diamond beads break into smaller particles, which perform as polishing chain and provide consistent polishing and achieve longer life. The special microstructure gives good performance, such as self-sharpening, continuous polishing force, and high removal rate with less scratches on the finish surface.

Specification

Model	Grit Size Distribution (μm)			
	D10	D50	D90	D95
D0.5-1-ZL	≥11.0	22.0±2.0	30 ~ 40	36 ~ 44
D1-3-ZL	≥11.0	22.0±2.0	30 ~ 40	36 ~ 44
D2-4-ZL	≥11.0	22.0±2.0	30 ~ 40	36 ~ 44
D3-6-ZL	≥11.0	22.0±2.0	30 ~ 40	36 ~ 44

Remark:
D0.5-1-ZL、D1-3-ZL are standard types, stable supply available.
D2-4-ZL、D3-6-ZL are not standard types.

Features

- **Unique Prepolymer Structure:** the product has better self-sharpening, higher grinding force and longer service life during use.
- **Good Surface Polishing Quality:** During the use of the product, the prepolymer will break down to form new small particles to participate in grinding and polishing to achieve a good polishing surface.

Applications

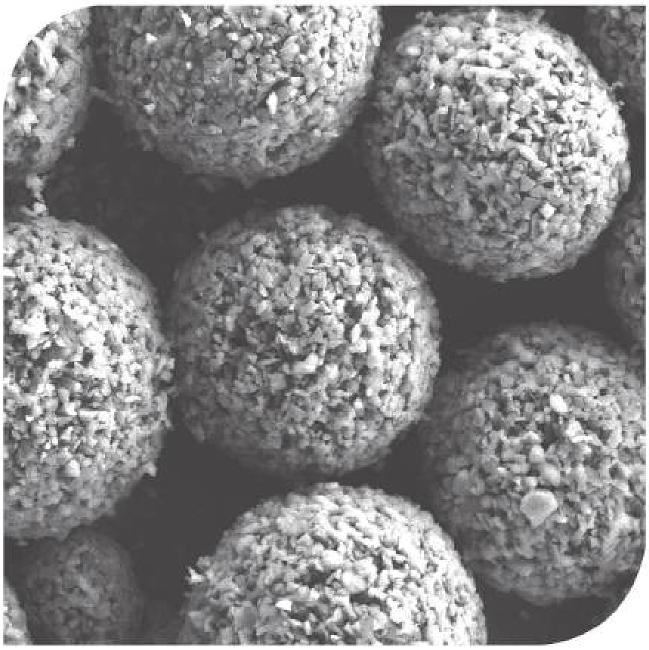
- Magnetic head

- Optical communication

- Semiconductor

Spherical Diamond Powder

GRISH spherical diamond powder, also known as "agglomerated diamond powder", employs a unique preparation process to agglomerate the original small-grain-size diamond powder to form spherical grinding particles. The primary particle size and aggregated particle size can be adjusted in accordance with grinding requirements. It features a high grinding rate, shallow grinding track, and high surface finish, which can significantly reduce the processing cost and it is the optimal choice for customers to achieve scientific and rapid processing.



Specification

Model	Primary particle size (μm)	Aggregated particle size (μm)	Application
DB 22026	Below 2 (PCD)	26	LED
DB 10530	0.4	30	Silicon Carbide
DB 11033	1.0	33	LED
DB 11538	1.5	38	LED
DB 13045	3.0	45	Glass Ceramics
DB 16050	6.0	50	Glass Ceramics

Remark: The primary particle size and the aggregated particle size can be adjusted upon the customer's requiremnt.

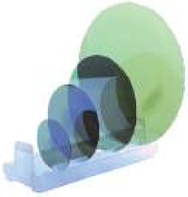
Features

- A unique preparation process can expose the diamond particles on the surface of the powder, increasing the cutting ability.
- The product has obvious processing advantages over traditional monocrystalline and polycrystalline powder.
- Aggregated particle size supports grinding, and primary particle size can achieve a fine grinding surface.
- The bonding agent has high strength, the abrasives are not easy to break and the processing consistency is high.
- The primary and aggregated particle size can be adjusted according to customer requirements, offering wide grinding adaptability.

Applications

- Sapphire LED material

- Silicon carbide substrate



- Optical crystal SiC material

- Semiconductor material

PCD Diamond Polishing Slurry

GRISH Polycrystalline Diamond Slurry formulated with PCD Powder and water/oil soluble carrier liquids to maximize cutting and polishing efficiency. PCD Slurry provides high removal rate, less scratches, stable grinding rate and uniform polishing surface. We can also customize slurry as per specific requirements by customers.

Specification

Model		Grit size
Water base	Oil base	
PC-6-W	PC-6-O	6μm
PC-4-W	PC-4-O	4μm
PC-3-W	PC-3-O	3μm
PC-2-W	PC-2-O	2μm
PC-1-W	PC-1-O	1μm
PC-N500-W	PC-N500-O	1/2μm
PC-N250-W	PC-N250-O	1/4μm
PC-N200-W	PC-N200-O	1/5μm
PC-N100-W	PC-N100-O	1/10μm

Remark: Customizations are available upon requests.

Comparison Data

Item	Other brand	GRISH	Improvement
Qty.of wafer	20pcs/round	28pcs/round	Production capacity 40%
Removal rate	2.15μm/min	2.575um/min	Removal rate 20%
Ra	8nm-12nm	8nm-12nm	-
Consumption	~10ml/pc	7ml/pc	Consumption 30%

Features

- The advantage of internal-produced PCD powder makes sure the quality at consistent and high level.
- Special formula keeps excellent dispersion and high removal rate with less scratches.
- Stable polishing rate gives uniform polished surface.

Applications

- Sapphire and SiC wafer

- Hard disk

- Hard ceramic

- Sealing ring

- Optical glass & crystal

MD & RCD Diamond Polishing Slurry

GRISH MD and RCD Slurries consist of well-graded powders and have good dispersion. Both water and oil-based are available. A complete range of specifications can meet various polishing requirements for hard materials.

Specification

◆ MD Diamond slurry

Model		Grit size
Water base	Oil base	
MD-6-W	MD-6-O	6μm
MD-4-W	MD-4-O	4μm
MD-3-W	MD-3-O	3μm
MD-2-W	MD-2-O	2μm
MD-1-W	MD-1-O	1μm
MD-N500-W	MD-N500-O	1/2μm
MD-N250-W	MD-N250-O	1/4μm
MD-N160-W	MD-N160-O	1/6μm
MD-N100-W	MD-N100-O	1/10μm

Remark: Customizations are available upon requests.

◆ RCD Diamond slurry

Model		Grit size
Water base	Oil base	
RC-17-W	RC-17-O	17μm
RC-10-W	RC-10-O	10μm
RC-6-W	RC-6-O	6μm
RC-5-W	RC-5-O	5μm
RC-4-W	RC-4-O	4μm
RC-3-W	RC-3-O	3μm

Remark: Customizations are available upon requests.

Applications

◆ Sapphire and SiC wafer

◆ Hard ceramic

◆ Hard alloy

◆ Optical glass & crystal

◆ Metal

Diamond-bead Polishing Slurry

GRISH diamond-beaded polishing slurry is a kind of polishing slurry formed by dispersing self-manufactured powder into the solution through scientific proportioning. Combined with appropriate equipment and process, it can be widely used in the processing of semiconductor substrate materials, optical materials, special ceramics and other fields that require high-precision processing.

Specification

Specification	Grit Size	Appearance	pH	Proportion (25℃)	Viscosity	Model
1.5um	20um	Light grey liquid	5-8	1.10±0.10	> 20cp	GDS-P10-Z1.5S, GDS-P10-Z1.5, GDS-P10S-Z1.5L
	30um				> 30cp	
	40um					

Applications

Suitable for cutting, grinding, polishing and other processes of materials such as sapphire, optical crystal, silicon carbide substrate, ceramics, and glass.

◆ Optical glass & crystal

◆ Ceramics

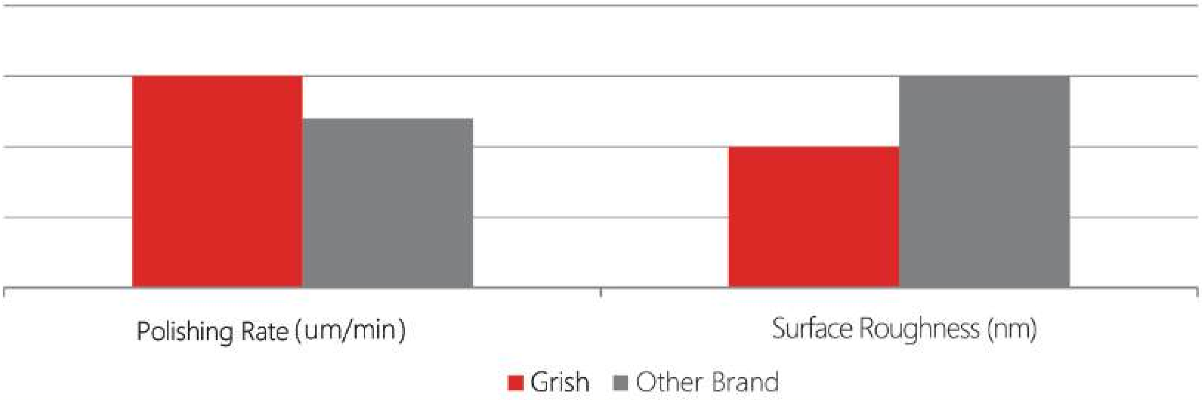
◆ Sapphire · LED materials

Features

◆ 1. Stable grinding rate and high efficiency.

◆ 2. Good surface effect with fewer scratches, reducing the time and cost of the latter stage of polishing.

◆ 3. Product models are diverse with a high degree of customization. You can choose different raw powder particle sizes, agglomerated particle sizes, and polishing slurry formulations for customized production.



CO/AO/SC Polishing Slurry

CO/AO/SC Polishing Slurry series are produced by micro sized abrasives. They provide super finishing results on high precision optical material, hard disk, wafer, optical fiber connectors, magnetic heads, crystal compounds, ceramics and hard alloys etc.

Specification

Abrasive	Model	Grit size	Area of use
Silicon Carbide (SC)	SC-1/2	0.5-1μm	FO Connector, Hard Disk, Ceramics, Hard Alloy, Gems, Optical Glass etc.
	SC-1	0.8-1.2μm	
Aluminum Oxide (AO)	AO-1/3	0.2-0.4μm	FO Connector, Crystals(Si, Ge, GaAs, InP, SiC), Hard alloy, Steel, Optical Glass etc.
	AO-1/2	0.4-0.6μm	
	AO-1	0.8-1.2μm	
	AO-2	1.6-2.4μm	
	AO-3	2.6-3.6μm	
Cerium Oxide (CO)	CO	0.3-3μm	FO Connector,Lens,Hard Alloy,Gems,Optics Glass etc.
-	SC-A3A1	-	Silicon Carbide Substrates and Chips
Package	250ml, 500ml, 1litre, 1gallon		

Remark: Customizations are available upon requests.

Applications

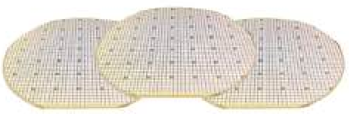
- Optical glass & crystal

- Hard disk

- Hard alloy

- Fiber Optical Connectors

- Silicon Carbide Substrates, Chips



Note

- Shake the bottle before using.
- Keep storage temperature at 0-35℃.

Features

- Good dispersibility.
- Uniform practical size distribution.
- High removal rate.

CMP Slurry

GRISH CMP Slurry takes colloidal silica as base with unique formula design according to different polishing requirements. Stable pH value keeps polishing rate stable and saves polishing time. It can be widely used in the chemical mechanical polishing for various materials, such as sapphire, semiconductor materials (ex. Si, Ge, GaAs, InP, SiC, GaN, AlN), stainless steel, aluminum magnesium alloy and compound crystal etc.

Specification

Model	Grit size	Particle appearance	pH	Viscosity	Concentration
SOQ-12D	110nm-130nm	Spherical	10.5±0.5	<20cst	20%
SO-100-PF	90nm-120nm			<10cst	20-50%
SO-80-PF	70nm-90nm				
SO-60-PF	50nm-70nm				
SO-40-PF	30nm-50nm				
SO-20-PF	10nm-30nm			<30cst	10-40%
Testing instrument	Laser particle analyzer	SEM/TEM	pH meter	Viscometer	Hydrometer

Remark: Customizations are available upon requests.

Applications

- Silicon carbide substrate

- Sapphire · LED material

- Stainless steel

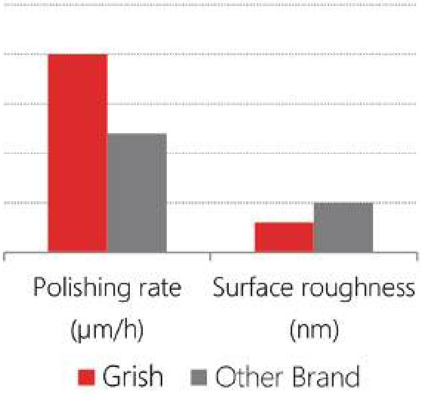
- Optical glass & crystal

- Aluminum nitride heat sink substrate

- Optical communication

Features

- Uniform spherical SiO_2 particles.
- High removal rate and stable polishing performance.
- Precision polishing quality with Ra<0.2nm and TTV<0.3um.
- Cycle use for several times.
- Applicable to low-temperature polishing process (Under 35℃).



High-efficiency CMP Slurry

GRISH high-efficiency CMP polishing slurry has an acidic pH value. During use, it is more stable and will not change significantly, maintaining a high and stable polishing rate. This product combines rough and fine polishing into a single process, greatly reducing processing costs and improving processing efficiency.

Specification

Parameters	Content	Testing Instrument
Grit Size (nm)	70-90	Laser particle analyzer
Particle Appearance	Spherical	SEM/TEM
pH	3-4	pH meter
Viscosity (cst)	<10	Viscometer
Consentration (%)	5-10%	Hydrometer
Package	25kg/5kg	

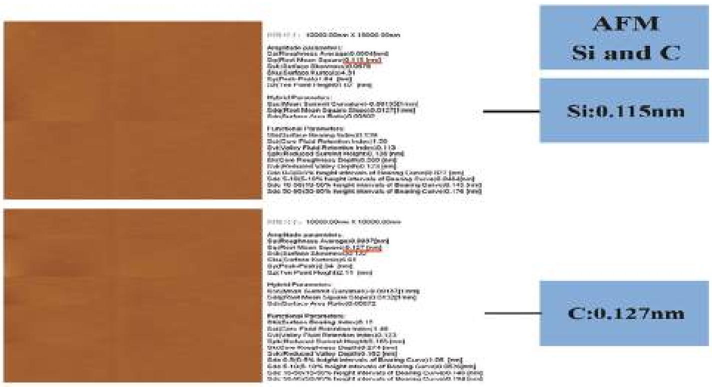
Remark: Customizations are available upon requests.

Features

- The acidic pH value is stable, maintaining a high and stable polishing rate.
- Combines rough and fine polishing into a single process, greatly reducing processing costs and improving processing efficiency.

Fine polihsing conditions and parameters

- Polishing Item: 6-inch SiC wafer*3 pcs*2 Head
- Polishing Pad: Nonwovens
- Polishing Slurry: SC-O80K (Grish)
- Adhesive Method: Wax
- Pressure: 120Kg (220g/cm^2)
- Rotation: below 66rpm, upper 60rpm
- Circulating Tank: 10L
- Chiller Temperature: 20°C



Conclusion:

The total time for traditional rough and fine polishing is 6-9 hours while the high-efficiency polishing slurry can meet the polishing requirements in 2-3 hours. After polishing, the Ra value that can be achieved on the carbon surface and silicon surface of silicon carbide is:

Si: 0.115nm　　C: 0.127nm

Applications

- Silicon carbide substrate

High-efficient Lapping Agent

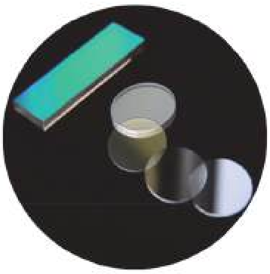
GRISH High-efficient Lapping Agent, also known as suspension, is a kind of water-soluble lapping agent, which is mostly used with B_4C together in the sapphire process of double-side lapping and produces high removal rate. It also has good performance of cooling, lubricating and rust-proof. Thus it improves the usage of B_4C efficiently and helps customers reduce the production cost.

Applications

- Optical glass & crystal

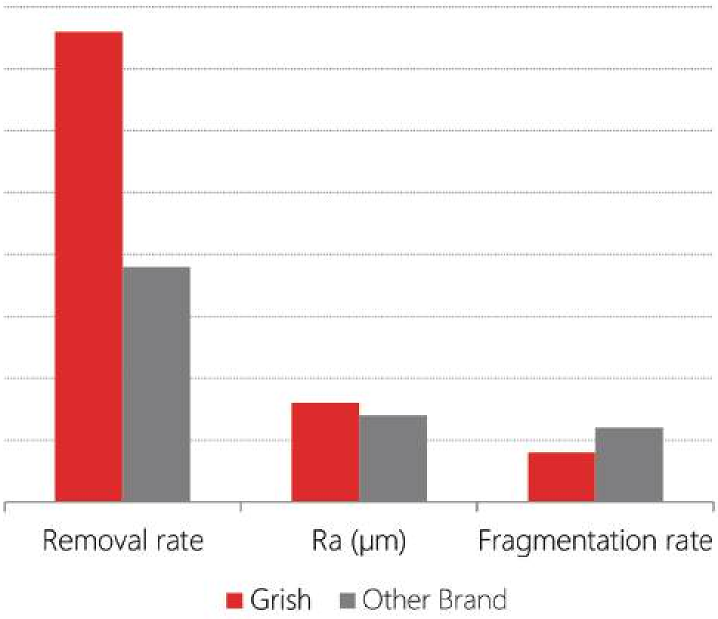
- Ceramic

- Sapphire and SiC wafer



Features

- Enhancing removal rate.
- Making B_4C used more cycles.
- Reducing fragmentation rate and getting good TTV.
- Cooling and lubricating wafers while lapping process.
- Good dispersion keeping B_4C from precipitation.



Lubricants & Dispersants (Base Liquid)

GRISH Lubricants can be mixed with abrasive materials such as diamond powder, which can achieve good dispersion and suspension effect, improve abrasive grinding force, achieve excellent grinding and processing effect. It is environmentally friendly and easy to be cleaned. Customizations are available upon the requirements, and it will be more convenient for customers to use.

Specifications

Model	Water-base	Oil-base
Mixable Abrasive	Diamond etc.	Diamond etc.
Mixable Abrasive Particle Size	Min. Size 0.03μm	Min. Size 0.10μm
Package	500ml, 1L, 5L, 25L	
Customized Content	Viscosity, pH value, density and other physical parameters of the lubricants. We can also customize the products according to the requirements of the customers.	

Features

- Good dispersity，high removal rate，wide applicability and so on.

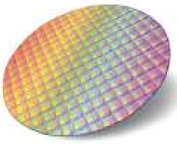
Applications

- Sapphire and SiC wafer

- Optical glass & crystal

- Hard metal alloy

- Silicon material



- Ceramics

- Metallography analysis

Polishing Oil

Grish Polishing Oil is a kind of polishing agent with good fluidity and permeability, which can provide good lubrication for the surface processing and improve the finish results.

Specification

Model	Packing specification
PGE-2	500ml/ bottle (can be adjusted according to customer requirements)
Storage conditions	1) Storage temperature: -5℃ ~ 40℃. 2) Storage humidity: <80%. 3) The product is recommended to be used within 2 years.

Features

- High purity and low ion content.
- Good fluidity and permeability.
- Good product stability and long storage time.

Note

- The product can be used directly or diluted with deionized water.
- When mixing this product with other additives, stir for 4-6 minutes.
- It is suggested that this product should not be reused.

Applications

- Stainless steel

- Sapphire and SiC wafer

- Optical communication

- Optical glass & crystal

- Hard metal alloy

Polishing Pad

GRISH Polishing Pad has unique microcellular structure which provides good polishing stability, abrasion resistance and keep good polishing liquid retention during polishing. It is widely used for high flattening process, such as wafer, glass, ceramic and metal polishing etc.

Specification

	Thickness	Hardness	Hole depth	Compression percentage	Velvt length	Size
	1.4±0.1mm	60±2	0.37mm	9%	0.4±0.05	Φ920±2mm
Testing instrument	Vernier caliper	Shore durometer	200X microscope	-	200X microscope	Tape measure

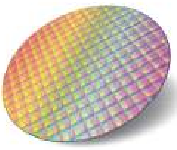
Remark: Customizations are available upon requests.

Applications

Used with CMP slurry together

- Sapphire material

- Silicon material



Mirror polishing

- Stainless steel
- Hard Alloy

Features

- Unique microcellular structure.
- Good flatness and does not epilate.
- High polishing stability.

Dental Polishing Strip & Disk

GRISH Polishing Strips and Disks are used for shaping and polishing of composite resin dentures.

Grit sizes of abrasives are distinguished by colors.

Customized grits and colors are available.

Choose the grit sizes from coarse to fine to use.

Specification

Colors	Name	Grit size(um)	Base material	Abrasive material	Specification
Purple/Blue/Green/Pink	Polishing strip	50(Purple)/30(Blue)/20(Green)/12 (Pink)	PET	Alumina	4mm * 152mm
	Polishing disk				φ=14mm、12mm、8mm
Grey/Brown/Orange/White	Polishing strip	60(Grey)/40(Brown)/20(Orange)/ 12(White)			4mm * 152mm
	Polishing disk				φ=14mm、12mm、8mm

Remark: Customizations are available upon requests.

Removal Rate

Grit size	W60	W50	W40	W30	W20	W12
Removal Rate (mg/12min)	≥210mg	≥180mg	≥150mg	≥110mg	≥50mg	≥22mg

Applications

- Composite resin

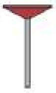
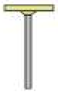
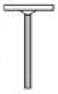
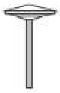
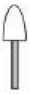
Features

- Thin and flexible film can closely fit the surface of teeth.
- Central blank area in the polishing strip makes it easy to insert into the gap of teeth without any damage to adjacent surface.
- The hose polishing disks have two-sided abrasives, convenient to use.
- High removal rate to save your time.

Diamond Polisher Kit

GRISH Diamond Polisher Kit is a complete system for adjusting, shaping and polishing of zirconia and ceramic crown. Good polishing efficiency is due to the high content of diamond abrasives. Glazing operation is not needed after the polishing.

Specification

Model	Color & Grit size	Area of use
1R064DZ 	Red 100μm	Shaping
1R173DZ 		
2Y040DZ 	Yellow 50μm	Pre-polishing
2Y313DZ 		
2Y213DZ 		
3W040DZ 	White 20μm	Fine polishing
3W313DZ 		
3W213DZ 		

Applications

◆ Zirconia teeth

Features

◆ Quick shaping, polishing and super finishing.
◆ Good heat sink effect during polishing at high speed.
◆ Bright without grooves, good effect as real teeth.
◆ All grinding materials can be sterilized by 135 degrees of high pressure steam.

Instruction

Red → Yellow → White

Diamond Compound

Grish Diamond compound includes both polycrystalline diamond series and monocrystalline diamond series with unique recipe. Consistent quality is ensured within diamond powder process as well as compound manufacture process by ISO9000 system.

Specification

	Appearance		Area of use
Grit size	Monocrystalline	Polycrystalline	
50µm	Light grey	-	Fast grinding
30µm			General grinding
15µm			Fine grinding
9µm		Black	High precision grinding
6µm			Fine polishing
3µm			High precision polishing
1µm			Ultra fine polishing
0.5µm			Optical polishing

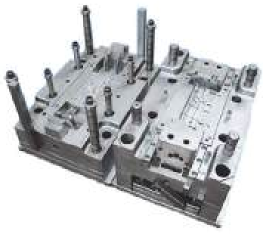
Remark: Customizations are available upon requests.

Features

- Consistent grinding and polishing performance with stable quality.
- Polycrystalline diamond paste makes finer surface than monocrystalline diamond paste at same grit.
- Customized paste is available upon request.

Applications

- Die and mould polishing



- Metallography polishing

- Spherical valve

- Metal

- Zirconia teeth

Solid Wax

GRISH Solid Wax is a kind of special hot-melt adhesive. It can be applied to stick carrier plate with work piece for single-side cutting, grinding or polishing process. It can meet the high requirement in the consistency of adhesive layer, strong adhesive force, heat resistance during process.

Specification

Model		Appearance	Softening temperature	Specific gravity at 25℃	Adhesive strength at 25℃	Size
Normal temperature	SW-TA1	Light yellow solid	62℃-68℃	1.063±0.02 g/cm³	＞20kgf/cm²	100g Cuboid or Cylinder
High temperature	SW-TB1		78℃-85℃			
High Bonding Strength	SW-N1		78℃-85℃		＞30kgf/cm²	
Alcohol-soluble solid wax	SW-CR		70℃-80℃			

Applications

Used for sticking carries with work pieces such as sapphire, optical crystal, ferrite material, ceramics, glass, etc. during cutting, grinding and polishing process.

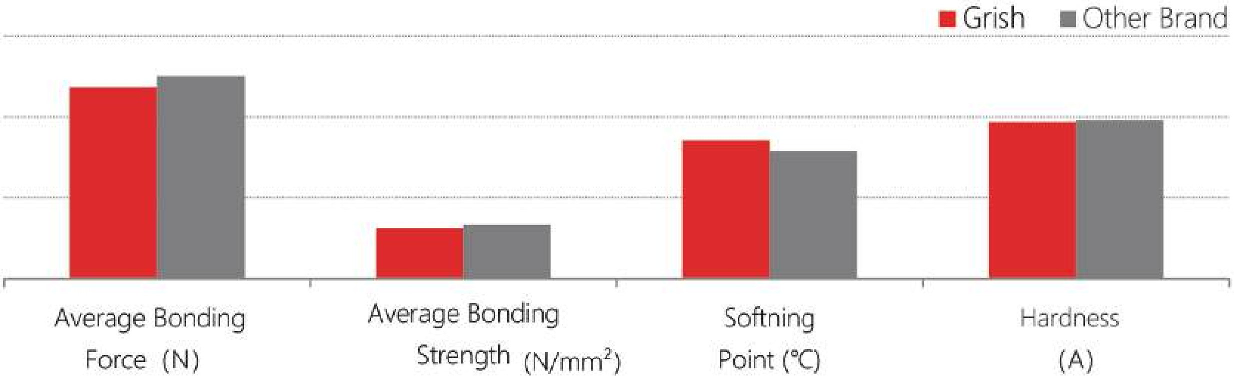
- Optical glass & crystal

- Aluminum nitride heat sink substrate

- Sapphire and SiC wafer

Features

- Good and stable performance.
- High bonding precision and strength.
- Easy to clean and dewax.
- Good TTV after waxing and dewaxing.



Liquid Wax

GRISH Liquid Wax is a kind of precision adhesive. It can be applied to stick carrier plate with work piece for single-side polishing process. It can meet the precision requirement in the consistency of adhesive layer, strong adhesive force, heat resistance during polishing process.

Specifications

	Normal temperature LW-NT-100	High temperature LW-HT -130
Appearance	Dark brown liquid	
Viscosity(cps at 25℃)	23.79	21.46
Solid content	30%	38%
Softening temperature	70℃	87℃
Specific gravity at 25℃	0.942	0.905
Recommended mounting temperature	120℃	
Recommended mounting time	30s-60s	
Cleaning agent	anhydrous ethanol, normal propyl alcohol, alkaline de-wax agent	

Remark:
1. Customizations are available upon requests.
2. The above data sheet is based on measured data.
3. Please adjust the process according to the actual conditions.

Applications

- Semiconductor

- Sapphire and SiC wafer

Features

- Good and stable performance.
- Easy waxing, stick firmly and easy to clean.

Dewax Liquid

Grish Dewax Liquid is an eco-friendly cleaner that can remove the wax layer on the surface of the part very well. It is a mild chemical liquid, non-toxic and harmless, but has a strong cleaning ability. It is a very common cleaning solution in the field of LED and window chips.

Specification

Model	Appearance	Specify Gravity	Acid base property	Boiling point	Life time (pcs/10litre)	Package
DW-S1	Yellowish transparent liquid	1.00±0.10	Weakly Alkaline	≥100℃	>2000	1litre, 5litre, 25litre, 1gallon, upon request
DW-S2		1.00±0.10	Weakly Acidic			
DW-Y1		0.90±0.10	-			
DW-T1		1.2±0.10	Alkaline			
DW-T4		1.2±0.10	Alkaline			

Applications

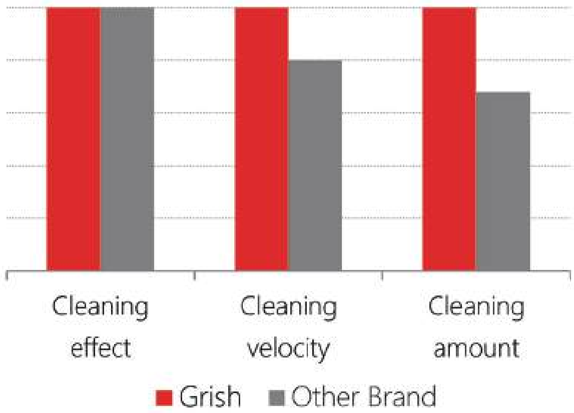
- Optical glass & crystal

- Aluminum nitride heat sink substrate

- Sapphire and SiC wafer

Features

- Quick dewaxing and no residue.
- High cleaning ability and long service life.
- Mild chemical proprieties and good TTV after dewaxing.



Fiber Polisher and Accessories

Polishing Equipment for Automotive Field

Camshaft Microfinishing Machine

Crankshaft Microfinishing Machine

Balance shaft Microfinishing Machine

Pressure assembling Machine

Micron (μm) and Mesh Conversion

Particle size	ASTM	Tyler	GB	BSS	JIS-R-6001	GRISH
400μm	#38					
420μm	#40	#35	#40	#36		
355μm	#45	#42	#45	#44		
320μm					#50	
300μm	#50	#48	#50	#52		
270μm	#53				#60	
250μm	#60	#60	#60	#60		
230μm					#70	
210μm	#70	#65	#70	#72		
200μm	#75					
194μm					#80	
180μm	#80	#80	#80	#85		
163μm					#90	
150μm	#100	#100	#100	#100		
137μm					#100	
125μm	#120	#115	#120	#120		
115μm					#120	
105μm	#140	#150	#140	#150		
100μm						#150
97μm					#150	
90μm	#170	#170	#170	#170		
82μm					#160	
80μm	#180	#180	#180	#180		#180
75μm	#200	#200	#200	#200		
69μm					#180	
63μm	#230	#250	#230	#240		
60μm	#250	#240	#250	#250		#240
57μm					#240	
53μm	#270	#270	#270	#300		
50μm	#300					#320
48μm					#280	
45μm	#325	#325	#325	#350		#360
40μm					#320	#400
37μm	#400	#400	#400	#400		
35μm					#360	
33μm	#425	#425	#425	#425		
30μm					#400	#600
25μm	#500	#500	#500	#500	#500	
23μm	#600					
20μm	#625	#625	#625	#625	#600	#800

Particle size	ASTM	Tyler	GB	BSS	JIS-R-6001	GRISH
17μm					#700	
16μm						#1000
15μm	#800	#800	#800	#800		#1200
14μm					#800	
13μm	#1000					
12μm						#1500
11.5μm					#1000	
10μm	#1250	#1250	#1250	#1250		
9.5μm					#1200	
9μm						#2000
8.5μm	#1670					
8μm					#1500	
6.7μm					#2000	
6.5μm	#2000					
6μm						#2500
5.5μm					#2500	
5μm	#2500	#2500	#2500	#2500		#3000
4μm					#3000	
3.4μm	#4000					
3μm					#4000	#4000
2.7μm	#5000					
2.5μm	#6000					
2μm	#6250	#6250	#6250	#6250	#6000	#6000
1.25μm	#7000					
1.2μm					#8000	
1μm	#12500	#12500	#12500	#12500		#8000
0.5μm					#10000	#10000
0.4μm						#15000
0.3μm					#15000	#20000
0.2μm					#20000	
0.1μm					#30000	

GRISH®

Headquarter
Beijing Grish Hitech Co., Ltd.

Tel: +86-10-5165 3168
E-mail: grish@grish.com
Web: www.grish.com
Rm. 402, Block C, Zhongguancun Development Building, No.12,
Shangdi information Rd., Haidian District, Beijing, China 100085

India Branch
Beijing Grish Hitech Co., Ltd.

Tel: +91-114-065 8460

Japan Branch
Summit Super Abrasive Co., Ltd.

Tel: +81-7-673 2780
Web: www.summit-smdp.com
1-14-17-6F Jyouhokutyou, Takatuki City, Osaka, Japan 569-0071

Grish Factories

Factory 1: Fangshan, Beijing
West Exit of Jiyang Village
Shilou Town, Fangshan
District,BEIJING,102400, China

Factory 2: Panjin, Liaoning
A22, Incubation Base, Fine
Chemical Industry Park,
Shuangtaizi District, Panjin
City, Liaoning Province

Factory 3: Zhuozhou, Hebei
50 meters north of Township
Road 009, Zhuozhou City,
Baoding City, Hebei Province