



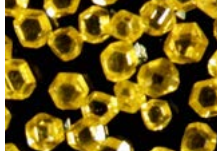
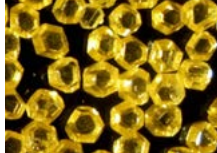
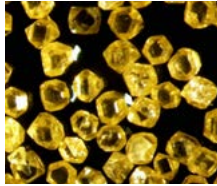
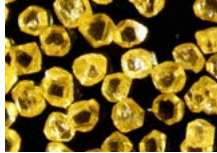
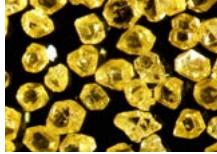
# Synthetic Diamond Powders for Stone, Mining & Construction

ISD Series / IPD Series



# ISD

ILJIN Synthetic Diamond

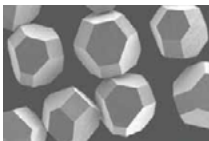
Grade	Mesh Size	Property	Application	Image
ISD-1750	25/30 ~ 60/80	Extremely high strength, thermal stability and strictly controlled shape in perfect cubo-octahedral	<ul style="list-style-type: none"> <li>· Large circular saws</li> <li>· Multi blade saws</li> <li>· Drill bits</li> <li>· Wire saws</li> <li>· Milling tools</li> </ul>	
ISD-1700	25/30 ~ 60/80	High strength, thermal stability and optimized shape for hard working condition	<ul style="list-style-type: none"> <li>· Large circular saws</li> <li>· Multi blade saws</li> <li>· Drill bits</li> <li>· Wire saws</li> <li>· Milling tools</li> </ul>	
ISD-1600	25/30 ~ 60/80	High strength, low inclusion and uniform shape distribution for hard working condition	<ul style="list-style-type: none"> <li>· Large circular saws</li> <li>· Multi blade saws</li> <li>· Drill bits / · Wire saws</li> <li>· Milling tools</li> <li>· Frame saws</li> <li>· Electroplated tools</li> </ul>	
ISD-1500	25/30 ~ 60/80	Mid-range of strength and shapes with low inclusions for general application	<ul style="list-style-type: none"> <li>· Drill bits</li> <li>· Wire saws</li> <li>· Frame saws</li> <li>· Electroplated tools</li> <li>· Free cutting tools</li> </ul>	
ISD-1300	25/30 ~ 60/80	Relatively friable with wider distribution of strength and shape for moderate applications	<ul style="list-style-type: none"> <li>· Electroplated tools</li> <li>· Grinding wheels</li> <li>· Polishing wheels</li> </ul>	

ISD Series will generate optimal performance in a variety of applications and available with diverse characteristics of size, shape, strength and cutting edge. Customized product development is also available upon request.

# IPD

ILJIN Premium Diamond

IPD series was developed to create superior performance even under severe working condition due to its property, high strength, sharp cutting edges and micro fracturing ability.

Grade	Mesh Size	Image
IPD-SU	30/40	
IPD-HI	35/45	
	40/50	

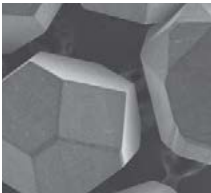
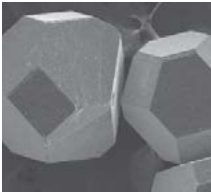
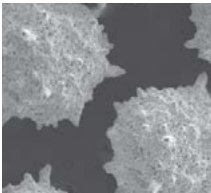
IPD series is available with Ti based coating and single mesh size upon request

# Coated Diamond

## Advantages of Titanium based coating

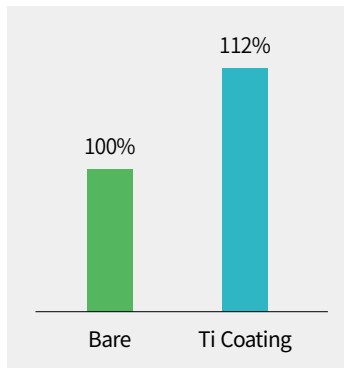
Improved diamond retention in metallurgical bond.  
Diamond protection from chemical damage in aggressive sintering condition.

### Available Coating

Item	Mesh Size	Property	Bond	Sintering Temperature	Image
<b>Ti Coating</b>	25/30 ~ 60/80	Resistant to chemical reaction and oxidation at normal sintering temp.	Cobalt Bronze Cu	750 ~ 900°C	
<b>Tix Coating</b>	25/30 ~ 60/80	Resistant to chemical reaction and oxidation at high sintering temperature (infiltration)	Tungsten Iron	850 ~ 1100°C	
<b>TN Coating</b>	25/30 ~ 60/80	Ti, Ni double layer High retention force in high content of bronze or Cu bond material	High Bronze Cu		

### Retention Force

Bond system : 100%  
Sintering temp. : 860°C (Hot Press)

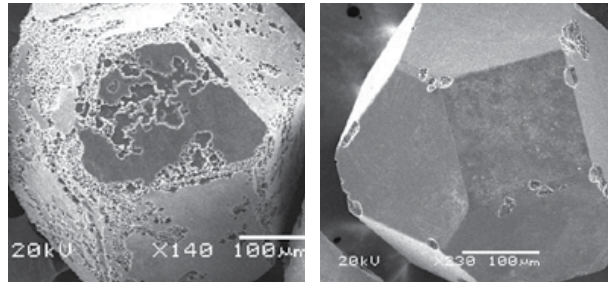


Bending force after sintering

### Corrosion Resistance of Coated Diamond

Diamond surface after sintering  
(Photo : reclaimed diamond)

Bond system : 40%Fe-25%Cu-35%W  
Sintering temp. : 1100°C



Uncoated

Coated

New coating system is available upon request

 **Diamond** [www.ILJINDIAMOND.com](http://www.ILJINDIAMOND.com)

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