

# DIAMOND COMPOUND ACCESSORIES & EQUIPMENT

From BORIDE Engineered Abrasives

QUALITY.

INNOVATION.

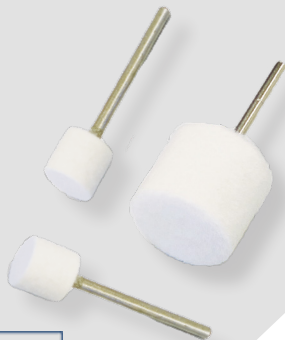
SERVICE.




Achieve a Diamond Finish with Ease Using  
BORIDE Diamond Compound, Diamond  
Finishing Accessories & Equipment



Made in the USA



 **BORIDE**  
Engineered Abrasives

 **ISO 9001:2015**  
Certificate #0Y631-IS5

## DIAMOND FINISHING MADE EASY

With the industry-wide demand for finer finishes on the rise, BORIDE Engineered Abrasives remains focused on providing the highest quality products for achieving a diamond finish as efficiently and cost effectively as possible. Our made in Michigan Diamond Compound and line of diamond finishing accessories and equipment has everything you need and more to get the job done.



## MADE IN USA DIAMOND COMPOUND

BORIDE offers three unique brands of made in the USA diamond compound including:

- **DIAMAX Diamond Compound**

Considered our premium brand of diamond compound. A medium-heavy concentration that is either oil or water soluble and consists of a precise blend of natural diamond. DIAMAX Diamond Compound offers unsurpassed cutting capability, toughness and extended durability resulting in superior finishing.

- **Mold Makers Diamond Compound**

Manufactured by BORIDE and formulated specifically for the mold and die industry, this diamond compound is well known throughout the industry and is the most versatile of our offering due to the number of grades, concentrations and formulations available. It has a wide thermal processing range allowing it to be used under the most demanding conditions. Mold Makers Diamond consists of a precise blend of synthetic diamond particles resulting in an aggressive yet cost effective diamond compound.

- **FALCON Diamond Compound**

Also manufactured by BORIDE, FALCON Diamond Compound's precise blend of natural and synthetic diamond particles are extremely sharp, blocky and of uniform size suspended in a specially designed carrier. All of the features of the compound are optimum for achieving excellent finishes, rapidly, with minimum effort and cost.

# Create the finest finishes with the highest quality mold polishing products.

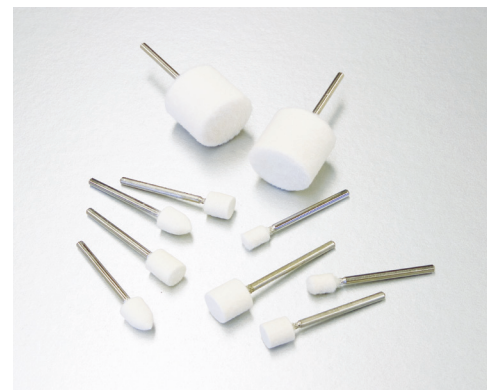
## DIAMOND FINISHING ACCESSORIES



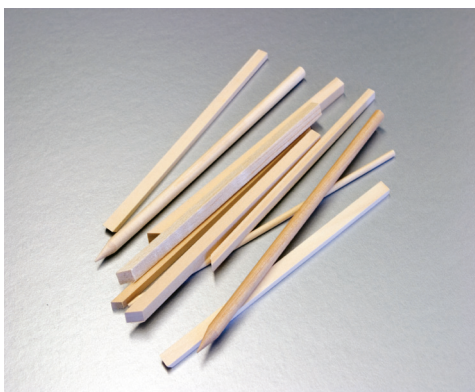
DIAMAX Diamond Thinner



Miniature Brushes



Felt Bobs



Wood Sticks



Felt Sticks



Reciprocating & Rotary Equipment

# DIAMAX DIAMOND COMPOUND

## *BORIDE's Premium Brand of Diamond Compound*

DIAMAX Diamond Compound is the leading choice for all polishing applications. DIAMAX is formulated for a broad range of mold and die finishing work offering faster cut rates and better surface finishes than other brands. Its precise blend of natural diamond results in superior finishing capability.

- Medium-heavy concentration
- Both oil and water soluble
- Natural diamond's unsurpassed cutting capability
- Excellent surface tension and adhesion to tool surfaces



Micron Size	Color	Mesh	Application	5 Gram	18 Gram
				Item	Item
1	White	14,000	Final Polishing	332166	332323
3	Yellow	8,000	Final Polishing	332637	332794
6	Orange	3,000	Final & Pre-Polish	333108	333265
8	Green	1,800	Pre-Polish Lapping	333579	333736
14	Blue	1,200	Pre-Polish Lapping	334050	334207
25	Red	800	Stock Removal	334521	334678
45	Brown	325	Stock Removal	334992	335149

# DIAMOND COMPOUND THINNERS

Diamond Compound Thinners are used to thin the slurry, extend the diamond compound and reduce gumming. These thinners penetrate quickly, lubricate every particle for maximum cutting action and help flush away abraded material while reducing lapping time. Made in the USA!



### DIAMAX Diamond Thinner

For use with oil-based diamond compounds. Available in the following size bottles:  
 2 oz - Item 336006  
 4 oz - Item 336005  
 16 oz - Item 336010



### BORI-LUBE 10 Polishing Lubricant

For use with water-based diamond compounds. Available in gallon size containers.  
 Item L10G

# MOLD MAKERS DIAMOND COMPOUND

## BORIDE's Most Versatile Yet Cost Effective Diamond Compound

Mold Makers Diamond Compound is manufactured by BORIDE at our facility in Traverse City, MI. It is very well known in the industry as it was specially engineered for mold and die applications. A wide thermal processing range allows it to be used under the most demanding conditions. It is the most versatile diamond compound that we offer due to the number of grades and concentrations available. Mold Makers Diamond consists of a precise blend of synthetic diamond particles resulting in an aggressive yet cost effective product.

- Available in either oil-based or water-based formulations
- Consistent diamond particle distribution
- **Medium Concentration:** For light stock removal and general use
- **Heavy Concentration:** Our most popular choice; for standard stock removal and finishing
- **Extra Heavy:** The professional's choice; higher concentration of diamond allows much faster stock removal



*Available in money saving kits!  
See page 7 for details!*

## Mold Makers Diamond Oil-Based Offering

Grade	Micron	Color	Application	5 GRAM SYRINGE			18 GRAM SYRINGE		
				Medium	Heavy	Extra Heavy	Medium	Heavy	Extra Heavy
100	100-150	Black	Stock Removal	337001	337002	337003	337021	337022	337023
170	80-100	Dark Gray	Stock Removal	337041	337042	337043	337061	337062	337063
230	54-80	Purple	Stock Removal	337081	337082	337083	337101	337102	337103
45	36-54	Brown	Stock Removal	337161	337162	337163	337181	337182	337183
30	22-36	Red	Stock Removal	331169	331170	331171	331179	331180	331181
20	15-25	Light Blue	Pre-Polish Lapping	337281	337282	337283	337301	337302	337303
15	12-22	Blue	Pre-Polish Lapping	331139	331140	331141	331149	331150	331151
9	8-12	Green	Pre-Polish Lapping	331109	331110	331111	331119	331120	331121
6	4-8	Orange	Final & Pre-Polish	331079	331080	331081	331089	331090	331091
4	2-6	Pink	Final & Pre-Polish	337521	337522	337523	337541	337542	337543
3	2-4	Yellow	Final Polish	331049	331050	331051	331059	331060	331063
2	1-3	Lavender	Final Polish	337601	337602	337603	337621	337622	337623
1	0-2	White	Final Polish	331019	331020	331021	331029	331030	331031
1/2	0-1	Light Gray	Final Polish	337681	331005	337683	337701	331007	337703
1/4	0-1/2	Gray	Final Polish	337721	337722	337723	337741	337742	337743
1/10	0-1/4	Ivory	Final Polish	337761	337762	337763	337781	337782	337783

# MOLD MAKERS DIAMOND COMPOUND

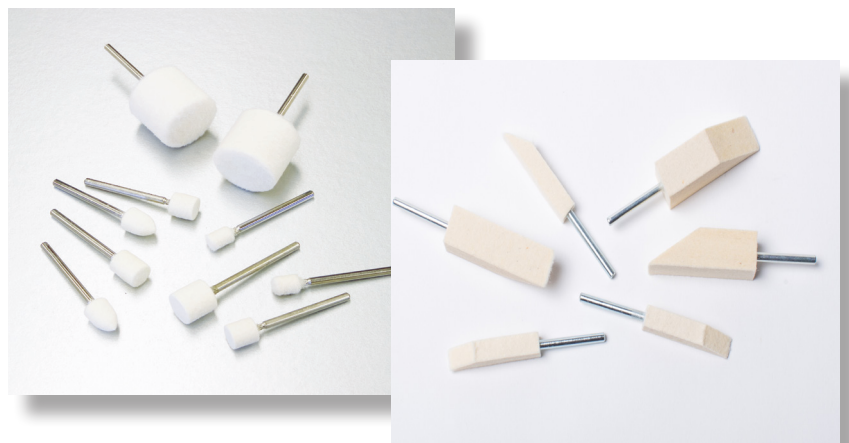
## Mold Makers Diamond Water-Based Offering

Grade	Micron	Color	Application	5 GRAM SYRINGE			18 GRAM SYRINGE		
				Medium	Heavy	Extra Heavy	Medium	Heavy	Extra Heavy
100	100-150	Black	Stock Removal	337011	337012	337013	337031	337032	337033
170	80-100	Dark Gray	Stock Removal	337051	337052	337053	337071	337072	337073
230	54-80	Purple	Stock Removal	337091	337092	337093	337111	337112	337113
45	36-54	Brown	Stock Removal	337171	337172	337173	337191	337192	337193
30	22-36	Red	Stock Removal	337251	337252	337253	337231	337232	337233
20	15-25	Light Blue	Pre-Polish Lapping	337291	337292	337293	337311	337312	337313
15	12-22	Blue	Pre-Polish Lapping	337331	337332	337333	337351	337352	337353
9	8-12	Green	Pre-Polish Lapping	337411	337412	337413	337431	337432	337433
6	4-8	Orange	Final & Pre-Polish	337491	337492	337493	337511	337512	337513
4	2-6	Pink	Final & Pre-Polish	337531	337532	337533	337551	337552	337553
3	2-4	Yellow	Final Polish	337571	337572	337573	337591	331061	337593
2	1-3	Lavender	Final Polish	337611	337612	337613	337631	337632	337633
1	0-2	White	Final Polish	337651	337652	337653	337671	337672	337673
1/2	0-1	Light Gray	Final Polish	337691	337692	337693	337711	337712	337713
1/4	0-1/2	Gray	Final Polish	337731	337732	337733	337751	337752	337753
1/10	0-1/4	Ivory	Final Polish	337771	337772	337773	337791	337792	337793

## FELT BOBS & STICKS

BORIDE mandrel-mounted Felt Bobs and Sticks are made from the finest wool and materials. Use with any of our diamond or other compounds to produce a high surface finish. Available in a variety of shapes, sizes and densities to meet the demands of your application. Made in the USA!

Visit our website [BorideAbrasives.com](http://BorideAbrasives.com) for our complete offering!



# MOLD MAKERS DIAMOND SUPER DUTY

## *BORIDE's Most Aggressive, Fast Cutting Diamond Compound*

Mold Makers Diamond Super Duty is our standard Mold Maker Diamond formulation but with a "super" concentration of consistently blended synthetic diamond particles. Made for the toughest jobs, Mold Makers Diamond Super Duty was engineered for polishing professionals looking for faster results and fewer polishing steps.

Grade	Micron	Color	Application	OIL BASED		WATER BASED	
				5 GRAM	18 GRAM	5 GRAM	18 GRAM
100	100-150	Black	Stock Removal	337004	337024	337014	337034
170	80-100	Dark Gray	Stock Removal	337044	337064	337054	337074
230	54-80	Purple	Stock Removal	337084	337104	337094	337114
45	36-54	Brown	Stock Removal	337164	337184	337174	337194
30	22-36	Red	Stock Removal	331172	331182	337254	337234
20	15-25	Light Blue	Pre-Polish Lapping	337284	337304	337294	337314
15	12-22	Blue	Pre-Polish Lapping	331142	331152	337334	337354
9	8-12	Green	Pre-Polish Lapping	331112	331122	337414	337434
6	4-8	Orange	Final & Pre-Polish	331082	331092	337494	337514
4	2-6	Pink	Final & Pre-Polish	337524	337544	337534	337554
3	2-4	Yellow	Final Polish	331052	331062	337574	337594
2	1-3	Lavender	Final Polish	337604	337624	337614	337634
1	0-2	White	Final Polish	331022	331032	337654	337674
1/2	0-1	Light Gray	Final Polish	337684	337704	337694	337714
1/4	0-1/2	Gray	Final Polish	337724	337744	337734	337754
1/10	0-1/4	Ivory	Final Polish	337764	337784	337774	337794

# MOLD MAKERS DIAMOND KITS

NEW Mold Makers Diamond Compound Kits are the perfect way to try a wide range of grades at a cost savings. Each kit contains (5) 2 gram syringes of Mold Makers Diamond Compound in grades #15 Blue, #9 Green, #6 Orange, #3 Yellow and #1 White plus a 2oz Bottle of DIAMAX Thinner. Available in oil and water based formulations as well as medium, heavy, extra heavy and super duty concentrations.

Concentration	OIL BASED	WATER BASED
Medium	337800	337804
Heavy	337801	337805
Extra Heavy	337802	337806
Super Duty	337803	337807

*Visit our website [BorideAbrasives.com](http://BorideAbrasives.com) for more information!*

# FALCON DIAMOND COMPOUND

***Falcon Diamond Compound is the ultimate polishing medium.***

Also manufactured by BORIDE, FALCON Diamond Compound's precise blend of natural and synthetic diamond particles are extremely sharp, blocky and of uniform size suspended in a specially designed carrier. All of the features of the compound are optimum for achieving excellent finishes, rapidly, with minimum effort and cost.

- Both oil and water soluble
- Consistent diamond particle distribution
- **Medium Light Concentration:** For light stock removal
- **Standard Concentration:** For standard stock removal and finishing
- **Heavy:** Higher concentration of diamond for faster stock removal



GRADE	2 GRAM	5 GRAM	18 GRAM	COLOR	MESH SIZE	MICRON	TYPE OF WORK
1/2 Standard	07A-CPD4000	07A-CPD1000	07A-CPD2000	Grey	60,000	0 - 1	Finest Finish of metallographic and optical quality.
1 Med Light	07A-CPD4001	07A-CPD1001	07A-CPD2001	Blue	14,000	0 - 2	
1 Standard	07A-CPD4002	07A-CPD1002	07A-CPD2002	Blue	14,000	0 - 2	
1 Heavy	07A-CPD4003	07A-CPD1003	07A-CPD2003	Blue	14,000	0 - 2	
3 Med Light	07A-CPD4004	07A-CPD1004	07A-CPD2004	Green	8,000	1 - 5	Final finish on hardened steels and harder materials including carbides. Also beryllium copper.
3 Standard	07A-CPD4005	07A-CPD1005	07A-CPD2005	Green	8,000	1 - 5	
3 Heavy	07A-CPD4006	07A-CPD1006	07A-CPD2006	Green	8,000	1 - 5	
6 Med Light	07A-CPD4007	07A-CPD1007	07A-CPD2007	Yellow	3,000	4 - 8	
6 Standard	07A-CPD4008	07A-CPD1008	07A-CPD2008	Yellow	3,000	4 - 8	
6 Heavy	07A-CPD4009	07A-CPD1009	07A-CPD2009	Yellow	3,000	4 - 8	
9 Med Light	07A-CPD4010	07A-CPD1010	07A-CPD2010	Red	1,800	6 - 12	For one-step medium finish or intermediate in multiple-step finishing.
9 Standard	07A-CPD4011	07A-CPD1011	07A-CPD2011	Red	1,800	6 - 12	
9 Heavy	07A-CPD4012	07A-CPD1012	07A-CPD2012	Red	1,800	6 - 12	
15 Med Light	07A-CPD4013	07A-CPD1013	07A-CPD2013	Brown	1,200	8 - 22	
15 Standard	07A-CPD4014	07A-CPD1014	07A-CPD2014	Brown	1,200	8 - 22	
15 Heavy	07A-CPD4015	07A-CPD1015	07A-CPD2015	Brown	1,200	8 - 22	
30 Med Light	07A-CPD4016	07A-CPD1016	07A-CPD2016	Mahogany	600	20 - 40	Finish to dimension without final finish. Remove tool marks.
30 Standard	07A-CPD4017	07A-CPD1017	07A-CPD2017	Mahogany	600	20 - 40	
30 Heavy	07A-CPD4018	07A-CPD1018	07A-CPD2018	Mahogany	600	20 - 40	
45 Med Light	07A-CPD4019	07A-CPD1019	07A-CPD2019	Purple	325	30 - 60	
45 Standard	07A-CPD4020	07A-CPD1020	07A-CPD2020	Purple	325	30 - 60	
45 Heavy	07A-CPD4021	07A-CPD1021	07A-CPD2021	Purple	325	30 - 60	

# FALCON DIAMOND COMPOUND

## Falcon Diamond Compound Kits

Falcon Diamond Compound sets are the perfect way to try a wide range of grades at a cost savings. All compounds are water and oil soluble.

Sets are available in either Medium Light, Standard or Heavy concentrations.

Each set contains:

(1) 6 oz bottle of Polishing Lubricant & Diamond Thinner

(5) 2 gram syringes: one of each of the following grades:

COLOR	MESH SIZE	MICRON	TYPE OF WORK
Green	8,000	1-5	Final finish on hardened steels and harder materials including carbides. Also beryllium & copper.
Yellow	3,000	4-8	
Red	1,800	6-12	For one-step medium finish or intermediate in multiple-step finishing.
Brown	1,200	8-22	
Mahogany	600	20-40	Finish to dimension without final finish. Remove tool marks.

Medium Light Concentration - 07A-CPD9000

Standard Concentration - 07A-CPD9100

Heavy Concentration - 07A-CPD9200

## MINIATURE BRUSHES

BORIDE's mandrel-mounted wire and hair Miniature Brushes are of the most durable in the industry. Brush filaments are securely embedded in a steel ring construction offering the highest quality through consistent distribution. Available in wheel, cup and end brush styles as well as soft hair, hard hair and brass wire options. Made in the USA!

Visit our website [BorideAbrasives.com](http://BorideAbrasives.com) for our complete offering!



## RECIPROCATING & ROTARY EQUIPMENT

BORIDE offers a wide range of reciprocating and rotary tools for your polishing needs. From air profilers to straight pencil type and angle grinders, these tools provide excellent performance with our Felt Bobs, and Sticks, Miniature Brushes, and Wood Sticks.

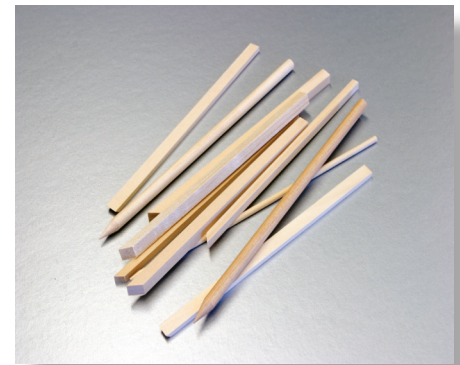
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## WOOD STICKS

BORIDE offers a wide selection of Wood Sticks for lapping and finishing by hand or with reciprocating and rotary tools. Our Wood Sticks are made of select Balsa (very soft) and White Birch (soft). Very soft Wood Sticks are used for final finishing with diamond or other compounds. Soft Wood Sticks are used for intermediate to final finishing. Available in a variety of sizes and shapes as well as an assortment kit.

*Visit our website [BorideAbrasives.com](http://BorideAbrasives.com) for our complete offering!*



## DIAMOND COMPOUND FAQs

### • **What is the difference between oil-based and water-based diamond compounds?**

Water based can be washed much more easily. The rule of thumb is that anything that is going through a coating process after it is polished requires a water-based compound. Residue can be left behind from the oil-based compounds and can cause problems in production. Oil-based compounds were developed for the mold and die industry. With oil-based compounds, more heat can be applied without causing issues on the mold. It also has excellent adhesion to tools and surfaces.

### • **How does a polisher choose between the Medium, Heavy, Extra Heavy and Super Duty concentrations?**

It comes down to polisher preference just like anything else in mold and die polishing. The Super Duty concentration would accomplish more and get the job done more quickly, however things can go wrong quickly if being used by an inexperienced polisher. Most mold and die polishers will use the Heavy concentration. Experienced polishers will use the Extra Heavy or Super Duty.

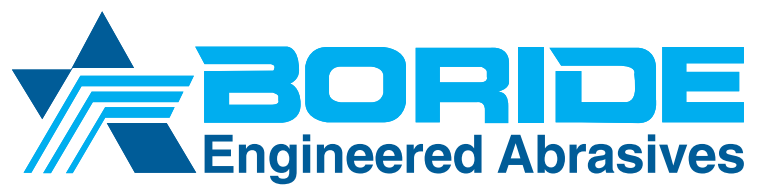
### • **What type of thinner should I use?**

Our DIAMAX Thinner is a great option for the oil-based compounds. We've also seen alcohol, methanol and kerosene used as thinners. For the water-based compounds, our BORI-LUBE 10 water-based lubricant would be a great option.

# ACHIEVE PROPER SPI MOLD FINISH STANDARDS

## ***Follow these steps to achieve an SPI A1 or SPI A2 Surface Finish using BORIDE Polishing Stones, Diamond Compound, Miniature Brushes, Felt, and Rotary Tools!***

1. The first step with mold polishing is to find an area in the shop that is clean and is away from other machining and polishing operations. Airborne dust and grit can greatly affect the final finish during the metal polishing process. Make every effort to eliminate these conditions.
2. Make sure all stoning marks are brought to a 600 or finer grit finish on the mold surface to achieve an SPI C1 surface finish. The type of metal being polished, the amount of material that needs to be removed, and the condition of your mold among other factors determine the type of Polishing Stone(s) required to achieve this step. If you are unsure of the type of abrasive stone you should be using, check out our Polishing Stone Application Chart available on our website [BorideAbrasives.com](http://BorideAbrasives.com) to help choose the proper Polishing Stone for the job.
3. Using DIAMAX Thinner with a very soft tissue, make sure the surface of your tool is cleaned extremely well between each step to ensure there is no residue left behind prior to moving onto the next step.
4. Next, remove stoning marks using a miniature brush on a rotary tool with either Grade #30 Red or Grade #15 Blue Diamond Compound. Use DIAMAX Thinner to thin the slurry and extend the life of the diamond compound. Using a slow speed (5,000 - 15,000 RPM) in a rotary pattern, apply light pressure to the mold surface. Note: If heavy pressure is used it can cause a surface condition called "Orange Peel". Exercise caution as applying too much pressure can over-stress the mold surface, generating excessive heat.
5. Once all stoning marks are removed, clean the mold surface completely. It cannot be stressed enough that cleaning is a very critical part of this polishing process. Extra care must be used to make sure all previous grade diamond compound is removed from the mold surface. It is recommended to use DIAMAX Thinner with a very soft tissue to clean the surface in an effort to eliminate any unwanted scratches during the cleaning process.
6. Next, it is time to remove the brush marks from the mold surface. Use a medium to hard Felt Bob with Grade #15 Blue or Grade #9 Green Diamond Compound to remove all brush marks from the previous polishing step.
7. Clean the mold surface again to remove any previous grade diamond compound used.
8. Proceed to the next level of polishing using Grade #9 Green or Grade #6 Orange Diamond Compound with a Felt Bob, stepping down to a medium or soft felt.
9. Clean the mold surface once more, be sure to remove all the previous diamond compound from the steps before.
10. Using a soft Felt Bob with Grade #3 Yellow Diamond Compound, you are able to achieve an SPI A2 Finish on the mold surface.
11. If an SPI A1 surface finish is desired, clean the mold surface once again and proceed with a Grade #1 White or Grade #1/2 Light Gray Diamond Compound with a soft Felt Bob.



2615 Aero Park Drive | Traverse City, MI 49686

[www.borideabrasives.com](http://www.borideabrasives.com)

P: 231.929.2121

TF: 800.662.0336

F: 231.946.2852