BUEHLER

# Polishing Guide

Superior polishing consumables and application expertise

*Strong Partner, Reliable Solutions*

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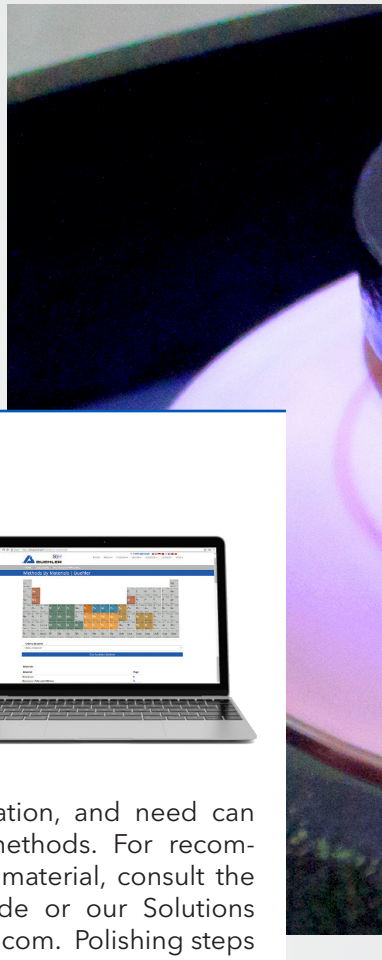
# Why is **Polishing** Important?



Polishing removes damage created in the grinding process and prepares the specimen for optical, micro-hardness, or SEM/EBSD analysis. A high quality polish will make the specimen surface smooth and shiny through mechanical and/or chemo-mechanical abrasion, while retaining the true microstructure and flatness.

Many factors influence the surface finish, such as:

- Abrasive size and type
- Cloth texture
- Polish time
- Specimen load
- Rotational direction
- Rotational speed




Each material, application, and need can require specialized methods. For recommended methods by material, consult the Buehler SumMet Guide or our Solutions page on www.buehler.com. Polishing steps for some common materials can be found on page 12.

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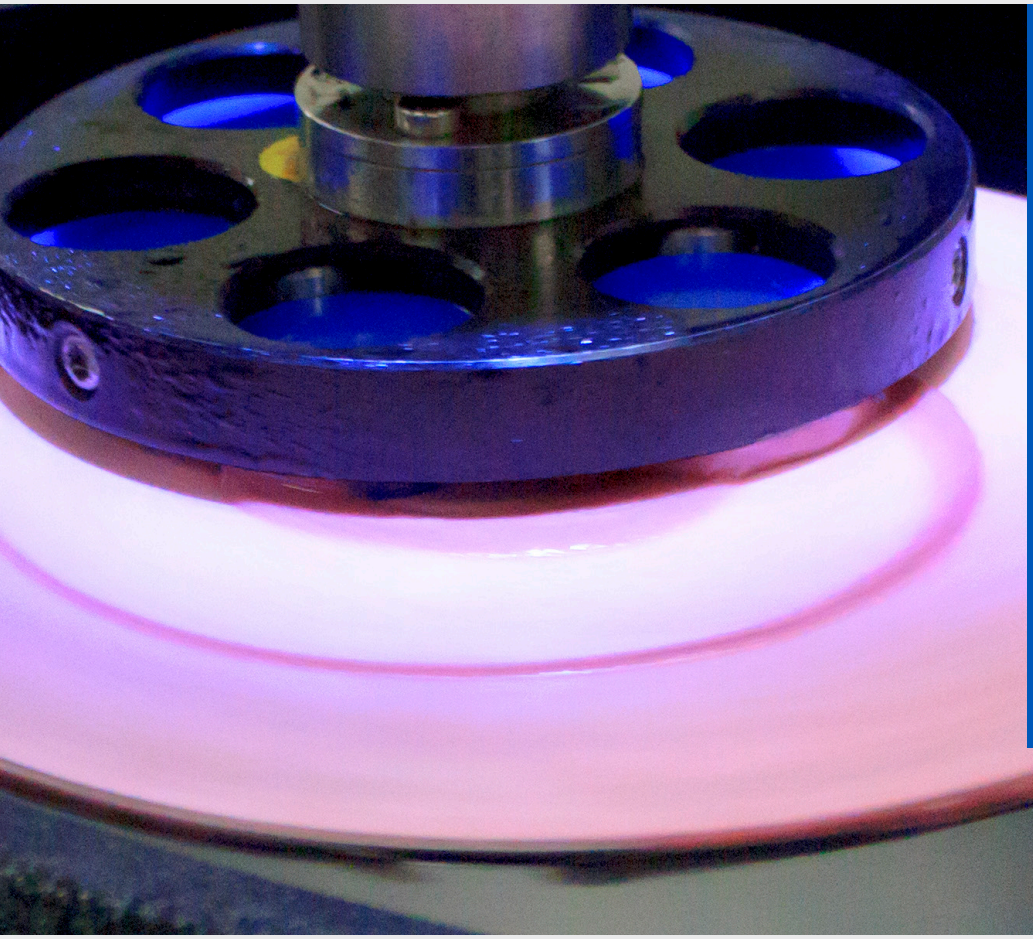


# Polishing **Process**

Polishing consists of two or more main stages, using successively finer abrasives. Coarse polishing follows grinding and removes the bulk of the deformation created in the grinding process. Intermediate polishing stages may be required to further reduce surface deformation and leave smaller scratches. Lastly, fine polishing perfects the surface finish by removing any trace of deformation.

### Coarse

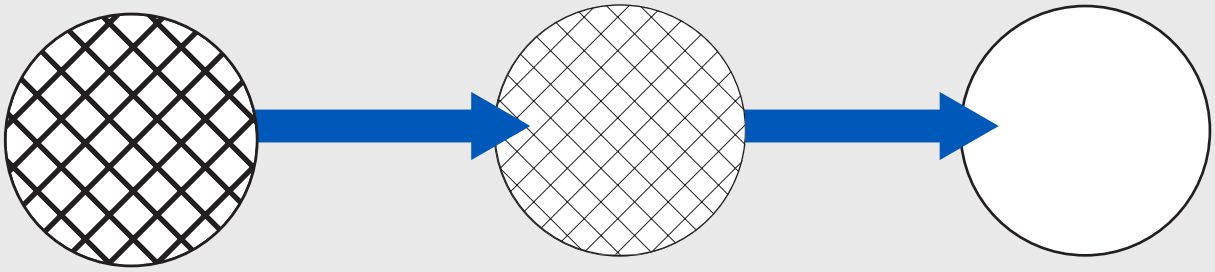
- Many large scratches
- Abrasive is added to a hard or medium napless polishing cloth

### Intermediate

- Many light scratches
- Abrasive is added to a hard, medium, or soft cloth

### Fine

- Scratch-free finish
- Suspended abrasives are applied to a softer, more resilient surface



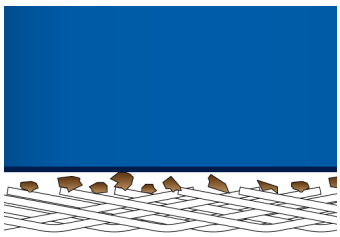
Poor polishing can cause excessive scratching, comet tails, relief, smearing, edge rounding, and embedding. These issues can lead to inaccurate results by impeding the ability to see a material's true structure and damaging the material. Refer to page 11 to learn how to correct these issues.

# POLISHING CLOTHS

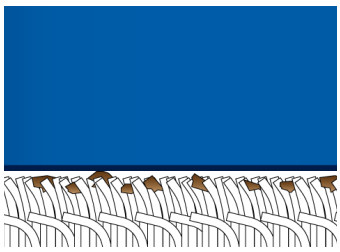
## A Cloth for Every Application

The type of cloth used depends heavily on the material being processed and the requirements for final analysis. With a variety of fabrics, weaves, and naps, Buehler has a cloth to fit every application.

Napless Cloth



Napped Cloth



## Easy to Use Magnetic Backing

Quickly change cloths without peeling and sticking. The durable magnetic backing reduces change-over time between cloths, increasing efficiency.

## Napless Cloths (Hard)

With hard cloths, abrasives sit on the surface of the cloth for aggressive polishing. These cloths are best for maximizing flatness.

## Napped Cloths (Soft)

Abrasives penetrate into the nap of softer cloths, allowing less aggressive material removal. These cloths are best for high quality surface finish.

## Selection Guide

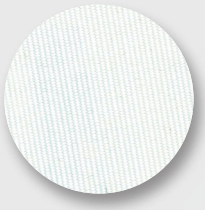
★ =Best choice for material type

● =Compatible with material type

| | | COARSE | | | | INTERMEDIATE | | | | | | | FINE | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | UltraPad™ | UltraPol™ | TexMet™ P | Nylon | TexMet C | TriDent™ | VerduTex | VelTex | WhiteFelt™ | PoliCloth | MicroCloth™ | MicroFloc | MasterTex™ | ChemoMet™ |
| MATERIAL TYPE | Aluminum | ★ | | | ● | ● | ★ | ● | ● | ● | ● | ● | ● | | ★ |
| | Cast Iron | ● | | ● | | ★ | ★ | ● | | ● | | ★ | ● | ● | |
| | Ceramic | | ● | ★ | | ★ | ● | ★ | | | | ● | | | |
| | Ceramic Thermal Spray | ★ | | | | ● | ★ | ● | | | | | | | ★ |
| | Copper | | | | ● | ★ | | ★ | ● | ● | ● | ● | ● | | ★ |
| | Generic Bulk Mount | | ● | ● | | ★ | ★ | ● | | | | ● | | | |
| | Generic Thin Section | | ★ | ● | | ● | ★ | ● | | | | ★ | | | |
| | Hard Steels | | | ● | ● | ● | ★ | ● | | ● | | ★ | ● | | ● |
| | Heat Treated Steels | | | ● | ● | | | | | ● | | ● | ★ | | ● |
| | High Temperature Solder in Ceramic | ● | | ★ | | | ● | ★ | | | | ● | | | ★ |
| | Metallic Thermal Spray | ★ | | | | | ★ | ● | | | | | | | ★ |
| | Micro-Electronic Material | ● | | ★ | | | | ★ | ● | | | ● | | ● | ★ |
| | Nickel Base Alloys | ★ | | ● | ● | ● | ★ | ● | | ● | ● | ● | ● | | ★ |
| | Non Populated PCB | ● | | | | ● | ★ | ● | | | | ● | | ● | ★ |
| | Polymers | | | | | ★ | | | | | | ● | ● | ★ | |
| | Silicon in Micro-Electronics | | | | | | ● | ★ | | | | ● | | ● | ★ |
| | Sintered Carbides | | | ★ | ● | | | ★ | | | | | | | ★ |
| | Soft Steels | ★ | | | ● | ● | ● | ★ | ● | ● | ● | ★ | ● | ● | ● |
| | Stainless Steel | ★ | | | ● | ● | ★ | ● | ● | ● | | ● | ● | | ★ |
| | Titanium | ★ | ● | | ● | ● | | | | ● | | ● | ● | | ★ |

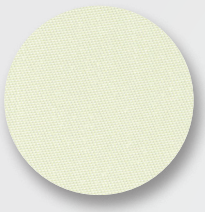
★ =Suited for most materials ◆ =Diamond Size ⬡ =Alumina ○ =Colloidal Silica

## Coarse



★ **UltraPad™**
Hard woven, napless
◆ 6µm & up

**UltraPol™**
Hard woven, nonaggressive silk cloth
◆ 6µm & up



**Nylon**
Oil resistant, medium hard woven, napless
◆ 6µm & up

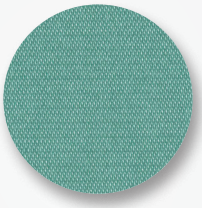
★ **TexMet™ P**
Hard perforated, non-woven cloth
◆ 6µm & up

## Intermediate

★ **TriDent™**
Soft, durable, synthetic woven cloth, napless
◆ 15 to 0.02µm

★ **TexMet C**
Non-woven pressed cloth
◆ 15 to 0.02µm
⬡ ○

**VelTex**
Short napped synthetic velvet cloth
◆ 9 to 1µm

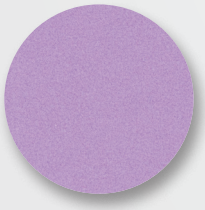


★ **VerduTex**
Durable, medium hard synthetic silk cloth
◆ 9 to 1µm

**WhiteFelt™**
Soft, durable matted wool cloth
◆ 6 to 0.02µm
⬡ ○

**PoliCloth**
Medium hard, woven wool cloth
◆ 6 to 1µm

## Fine



**MicroFloc**
Soft, long napped cloth
◆ 3 to 0.02µm
⬡ ○

★ **MicroCloth™**
Soft, versatile, long napped synthetic rayon cloth
◆ 5 to 0.02µm
⬡ ○

**MasterTex™**
Soft synthetic velvet with low nap
◆ 1 to 0.05µm
⬡ ○

★ **ChemoMet™**
Soft, porous, chemically resistant, synthetic cloth
◆ 1 to 0.02µm
⬡ ○

# DIAMOND SUSPENSIONS & PASTES

Diamond is routinely used for the preparation of most materials due it its high removal rates. Available in a wide range of micron sizes, carriers, and diamond type, MetaDi diamond products are a versatile preparation tool.

### Best-In-Class Repeatability

Strict quality control for particle size and shape ensures a reproducible surface finish.

### Avoid Contamination

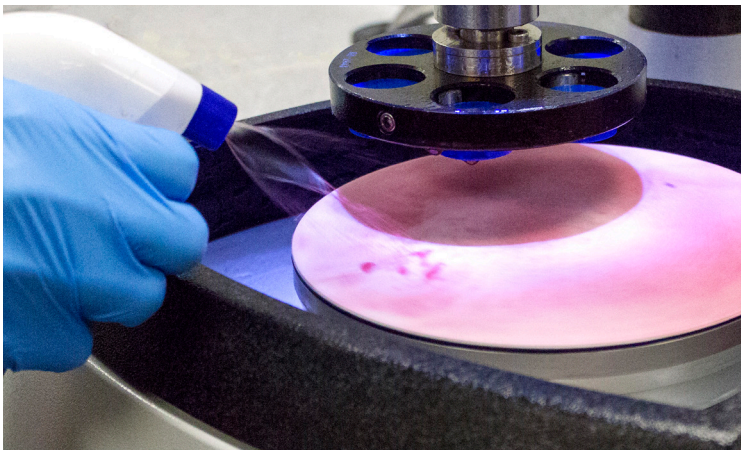
Color coding by micron size helps prevent cross contamination.

### Ensure Safety & Compliance

MetaDi Supreme is nontoxic, noncombustible, and environmentally safe.

## MetaDi Diamond Suspensions

- High concentration diamond is uniformly suspended for ease-of-use and consistent application.
- Apply using a spray bottle or go hands free—integrate into your grinder/polisher with the Burst Dispensing System.
- Available in polycrystalline, monocrystalline, and oil-based monocrystalline (for water sensitive materials).



## MetaDi Diamond Pastes

- Materials such as very soft alloys, pure metals, or refractory metals are prone to diamond embedding, so a paste is better suited for polishing.
- Pair with a lubricant like: MetaDi Fluid or AutoMet Oil (for water sensitive materials).
- Available in natural monocrystalline, synthetic monocrystalline, and a blend of natural and synthetic polycrystalline.

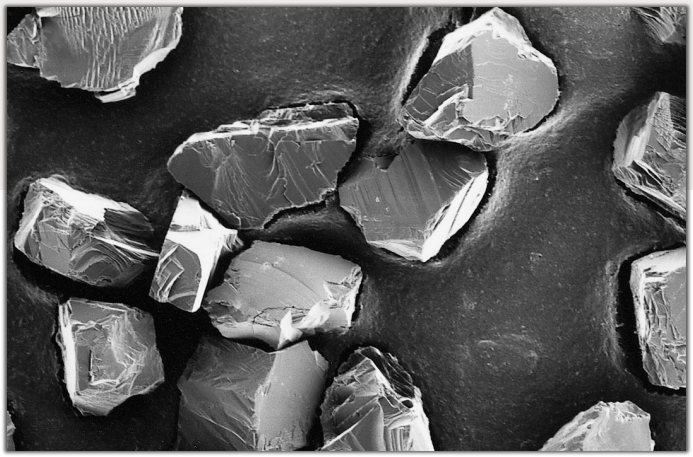
# Monocrystalline vs. Polycrystalline

Material removal rate directly impacts the speed of each process step. A higher removal rate means moving on to the next step more quickly, allowing faster analysis and increasing throughput.

Because of its multi-faceted shape, polycrystalline diamond removes material faster and produces less deformation than monocrystalline.

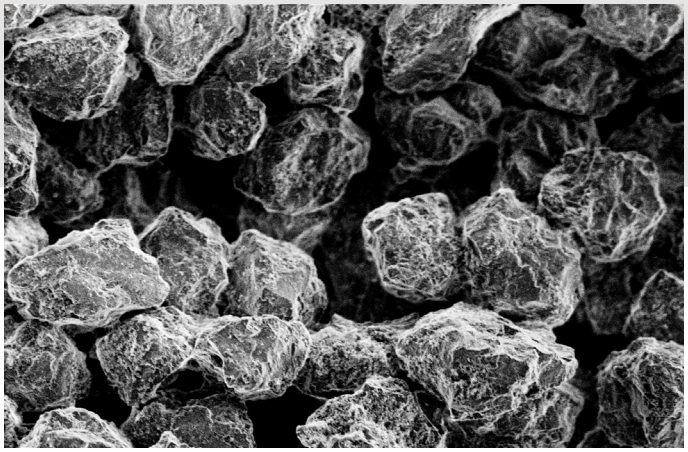
## MetaDi | Monocrystalline

- Cost effective
- Sharp, blocky particles
- Best for ceramics

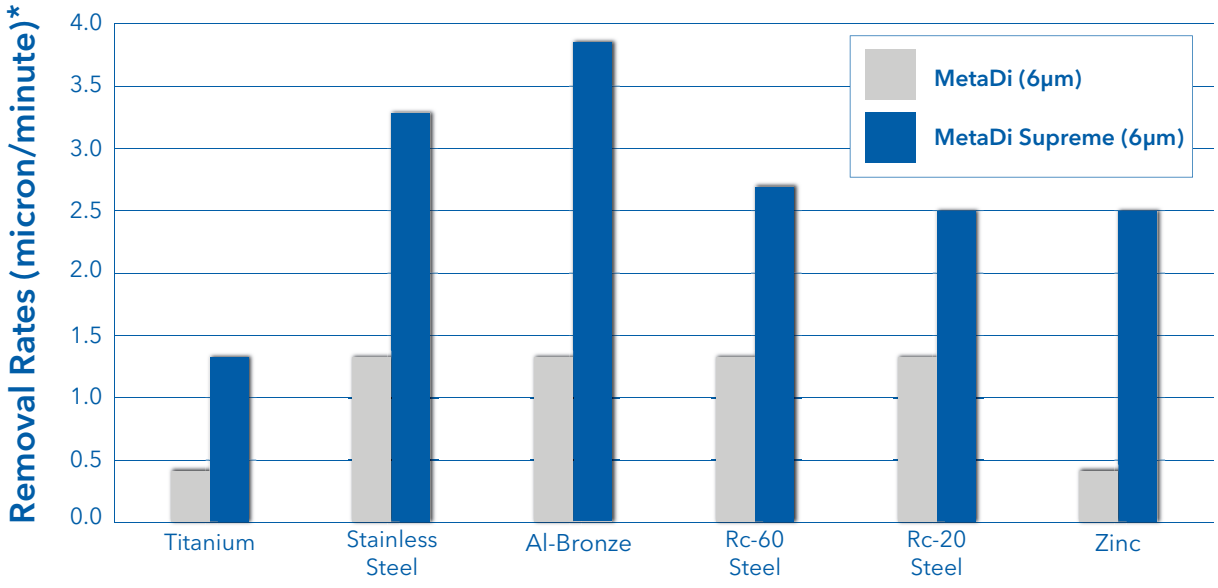


## MetaDi Supreme | Polycrystalline

- Faster preparation times
- Reduced deformation
- Only small amount needed for high quality polish



## Removal Rate of MetaDi vs. MetaDi Supreme




**Actual results may vary depending on material, cloth, and preparation parameters.*

# FINAL POLISHING SUSPENSIONS

Final polishing suspensions are designed to remove the final layer of surface deformation often invisible to the naked eye. The removal of this deformation is essential when evaluating with high magnifications, polarized light, differential interference contrast, as well as using EBSD techniques.

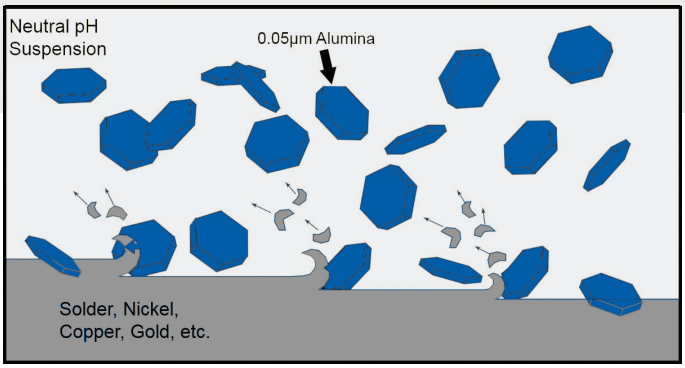
Different types of final polishing suspensions employ different mechanisms for material removal. MasterPrep Alumina contains seeded gel alumina, which provides efficient material removal combined with superior surface finish via a purely mechanical, abrasive process. MasterMet 2, on the other hand, contains colloidal silica, which has a soft reaction layer to chemically attack the specimen surface. The spherical shape of the colloidal silica enables it to wipe away the top surface layer without scratches.

The material type will dictate which final polishing suspension is best for the application. See below for general recommendations. For more detailed guidance, refer to the SumMet Guide.

## MasterPrep Alumina

Uses purely mechanical removal

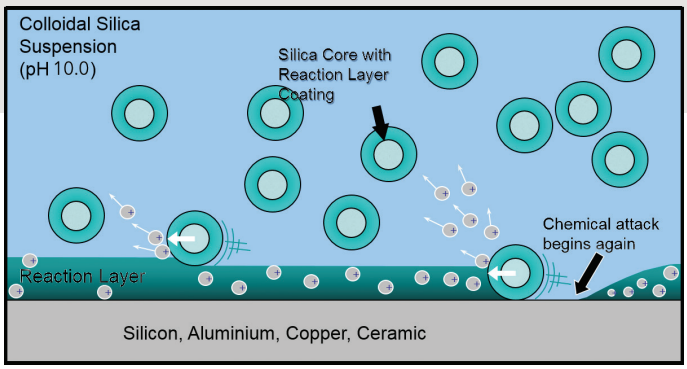
- Preferred for Iron, Steel, Stainless Steel, Copper, Polymers, minerals, micro-electronics, precious metals
- Best alumina quality due to sol-gel suspension
- 8.5 pH



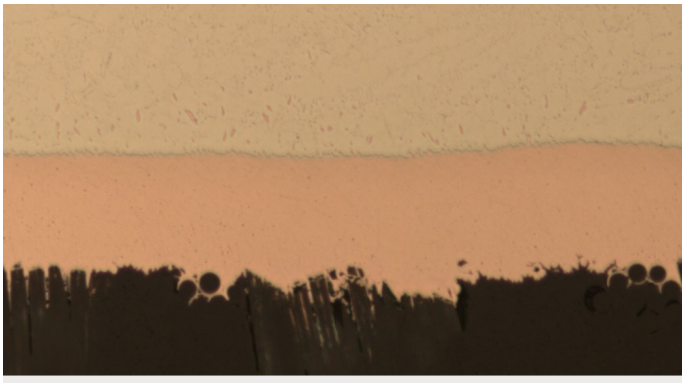

## MasterMet 2 Colloidal Silica

Uses a chemical reaction to attack top layer, then mechanical removal to sweep away

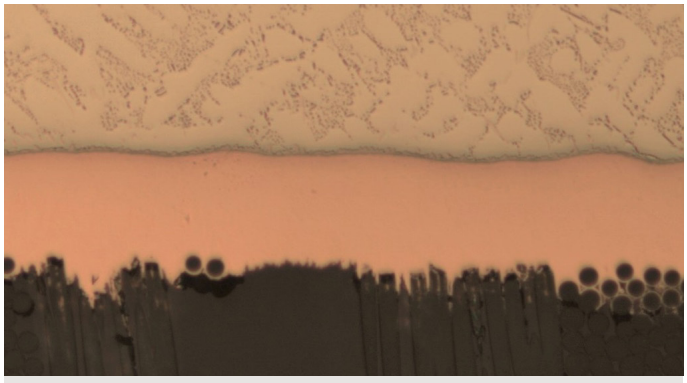
- Preferred for Aluminum, Refractory metals, silicon in micro-electronics, ceramic
- Non-crystallizing for a superior, scratch-free finish
- 10.5 pH




Selection of the polishing media can be critical. In the examples below of copper layer on solder, MasterPrep and MasterMet are suitable for different analyses.



**MasterPrep**: Purely mechanical polish keeps the sample flat, but the copper is not completely damage free. Best for coating measurement and boundary layer analysis.



**MasterMet:** Chemo-Mechanical polish creates etching in the solder, and slight polishing relief, but provides a damage free polish. Best for microstructural analysis of the copper and EBSD.

# **POLISHING** ACCESSORIES

## Burst Dispensing System

Burst is a flexible, easy to operate dispensing system for all diamond and final polishing suspensions. With a variety of operating modes, solutions can be tailored for any Buehler grinder-polisher set-up.

- Improve both productivity and consistency by dispensing suspensions at configurable rates.
- Connect up to 5 modules, with optional stadium seating (suggested when using more than 2).
- Positionable dispensing arm can apply diamond where needed.
- Manual, Semi-Automatic, and Automatic modes.
- Magnetically driven stir bar prevents settling of suspensions.

# FAQ'S (FREQUENTLY ASKED QUESTIONS)

## How do I know when to move to the next polishing step?

A specimen is ready to move to the next step once all the scratches are uniform and evidence of the previous step is gone. Polishing should be performed for the minimum amount of time required to achieve the desired results, as over-polishing can damage the specimen.

## How much suspension/paste do I add?

The cloth should be visibly wet without casting off when rotating. Lubrication should be maintained throughout the polishing cycle. Too little will cause heat damage, reduce material removal, and can rapidly degrade the cloth. Too much can result in hydroplaning with little material removal and wastes abrasive.

## What size abrasive should I use next?

Abrasive size should reduce during each step of polishing. As a general guideline for diamond abrasives, divide the current abrasive size by 3 for the next polishing step.

## How long will my cloths last?

Often, a cloth may get contaminated from improper care or gouged before showing significant signs of wear. End of life for a cloth is typically indicated by unusually high polish time or a drastically different texture than when new.

## How can I extend the life of polishing cloths?

Proper storage and maintenance will enhance cloth life. Rinsing will also extend cloth life, but requires extra abrasive to recharge. Chamfering the edges of your mount will reduce the likelihood of damaging your cloth with a sharp edge.

## Do I have to use a different cloth for each polishing step?

To avoid cross contamination, each polishing cloth should only be used with one abrasive size. Applying multiple abrasive sizes to a single cloth can create scratches on the specimen during polishing.

## My PSA backed cloths are hard to remove. How can I get them off more easily?

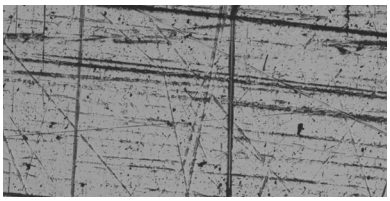
Use magnetic back cloths, which eliminate cloth removal time, or MagnoPad, a Teflon coated carrier plate.

# Still have questions? Buehler is your lab partner.

Buehler Solution Centers provide materials preparation and analysis training to our customers worldwide. Our mission is to deliver valuable application solutions by employing Buehler methodologies.

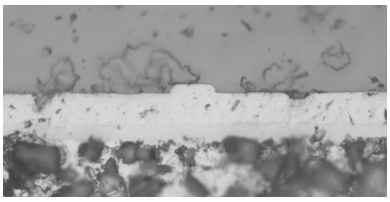
- Worldwide customer support labs
- Buehler SumMet Guide
- TechNotes and SumNotes
- Seminars, webinars, and classes

# SOLUTIONS TO COMMON ISSUES



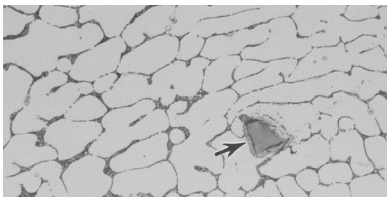
## Large Scratches

Large scratches remaining in the finer polishing stages may be a symptom of cross-contamination. Rinsing the specimen, specimen holder, and platen between steps can help clean out the larger diamond, reducing cross-contamination. If a specimen is cracked or porous, rinse in an ultrasonic bath for the minimum time required to rinse it clean. Extended ultrasonic cleaning time can damage the specimen. During the last 30 seconds of final polishing, stop applying additional suspension, replacing it with water to flush the cloth surface and rinse the specimen.



## Relief

Relief is demonstrated by harder phases or constituents being left raised above the surface of the softer matrix. Prevent relief by reducing polish time, using a shorter napped cloth, or applying diamond paste rather than suspension.

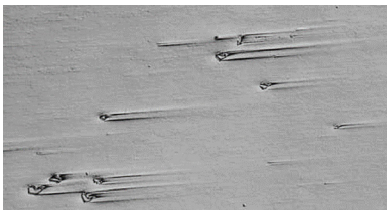


## Diamond Embedding

Embedding occurs when harder particles become engrained in softer material or cracks and voids. Using a more fixed abrasive, such as MetaDi Diamond Paste, or ultrasonic cleaning between stages can reduce the likelihood of embedding.

## Smearing

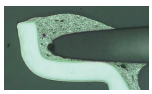
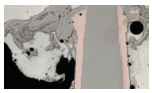
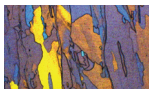
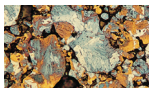
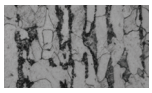
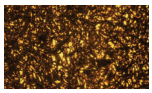
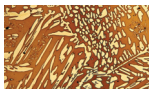
Smearing is a superficial but significant form of damage that makes microstructural details less distinct, often caused by soft materials or poor lubrication. Smearing can be improved by using short napped cloths, vibratory polishing, or etching and then repeating the final polish.



## Comet Tails

Comet tails are a result of poorly bonded, very hard phase in softer matrix; pores in matrix results in unidirectional grooves emanating from particles or holes; or excessive lubrication. To avoid this, use hard, napless cloths and/or reduce applied pressure. For porous materials, impregnate the pores with epoxy or wax.

# RECOMMENDED METHODS

| | Material | | Grinding Steps | Polishing Step 1 | Polishing Step 2 | Polishing Step 3 | Polishing Step 4 |
|---|---|---|---|---|---|---|---|
| ELECTRONIC MATERIALS | Non Populated Printed Circuit Board |  | **CarbiMet**<br>320grit [P400]<br>600grit [P1200] | **TriDent™**<br>9µm MetaDi™ Supreme Diamond | **TriDent**<br>3µm MetaDi Supreme Diamond | **ChemoMet™**<br>MasterPrep™ Alumina | **ChemoMet™**<br>MasterPrep™ Alumina |
| | Silicon in Micro-Electronics |  | **CarbiMet**<br>600grit [P1200] | **VerduTex™**<br>6µm MetaDi Supreme Diamond | **VerduTex**<br>3µm MetaDi Supreme Diamond | **VerduTex**<br>1µm MetaDi Supreme Diamond | **ChemoMet**<br>MasterMet™ Silica |
| | Micro-Electronic Material |  | **CarbiMet**<br>320grit [P400] | **TexMet™ P**<br>9µm MetaDi Supreme Diamond | **VerduTex**<br>3µm MetaDi Supreme Diamond | **VerduTex**<br>1µm MetaDi Supreme Diamond | **ChemoMet**<br>MasterPrep Alumina |
| FERROUS & NON-FERROUS MATERIALS | Soft Aluminum Alloys |  | **CarbiMet**<br>320grit [P400] | **TexMet C**<br>9µm MetaDi Supreme Diamond | **TexMet C**<br>3µm MetaDi Supreme Diamond | **TexMet C**<br>1µm MetaDi Supreme Diamond | **ChemoMet**<br>MasterMet Silica |
| | Nickel Based Superalloys |  | **CarbiMet**<br>240grit [P280] | **Apex Hercules H or S**<br>9um MetaDi Supreme Diamond | **TriDent**<br>3µm MetaDi Supreme Diamond | **ChemoMet**<br>MasterMet Silica | |
| | Titanium Alloys |  | **CarbiMet**<br>320grit [P400] | **UltraPad™**<br>9µm MetaDi Supreme Diamond | **ChemoMet**<br>MasterMet Silica | | |
| | Copper & Copper Alloys |  | **CarbiMet**<br>220grit [P240] - 320grit [P400] | **TexMet C**<br>9µm MetaDi Supreme Diamond | **VerduTex**<br>3µm MetaDi Supreme Diamond | **VerduTex**<br>1µm MetaDi Supreme Diamond | **ChemoMet**<br>MasterMet Silica |
| | Hard Steels |  | **Apex DGD Red**<br>75µm Diamond | **Apex Hercules H**<br>9µm MetaDi Supreme Diamond | **TriDent**<br>3µm MetaDi Supreme Diamond | **MicroCloth™**<br>MasterPrep Alumina | |
| | Soft Steels |  | **CarbiMet**<br>320grit [P400] | **UltraPad**<br>9µm MetaDi Supreme Diamond | **VerduTex**<br>3µm MetaDi Supreme Diamond | **MicroCloth**<br>MasterPrep Alumina | |
| | Cast Iron |  | **CarbiMet**<br>320grit [P400] | **TexMet C**<br>9µm MetaDi Supreme Diamond | **TriDent**<br>3µm MetaDi Supreme Diamond | **MicroCloth**<br>MasterPrep Alumina | |
| | Heat Treated Steel |  | **Apex DGD Red**<br>75µm Diamond | **Apex Hercules S**<br>9µm MetaDi Supreme Diamond | **MicroFloc**<br>3µm MetaDi Supreme Diamond | | |
| | Stainless & Maraging Steel |  | **CarbiMet**<br>120grit [P120] - 320grit [P400] | **UltraPad**<br>9µm MetaDi Supreme Diamond | **TriDent**<br>3µm MetaDi Supreme Diamond | **ChemoMet**<br>MasterPrep Alumina | |
| COMPOSITES | Polymer-Matrix Composites |  | **CarbiMet**<br>320grit [P400] | **TexMet P**<br>9µm MetaDi Supreme Diamond | **VerduTex**<br>3µm MetaDi Supreme Diamond | **MicroCloth**<br>MasterPrep Alumina | |
| COATING | Metallic Thermal Spray Coating |  | **Apex DGD Yellow**<br>35µm Diamond | **UltraPad**<br>9µm MetaDi Supreme Diamond | **TriDent**<br>3µm MetaDi Supreme Diamond | **ChemoMet**<br>MasterMet Silica | |

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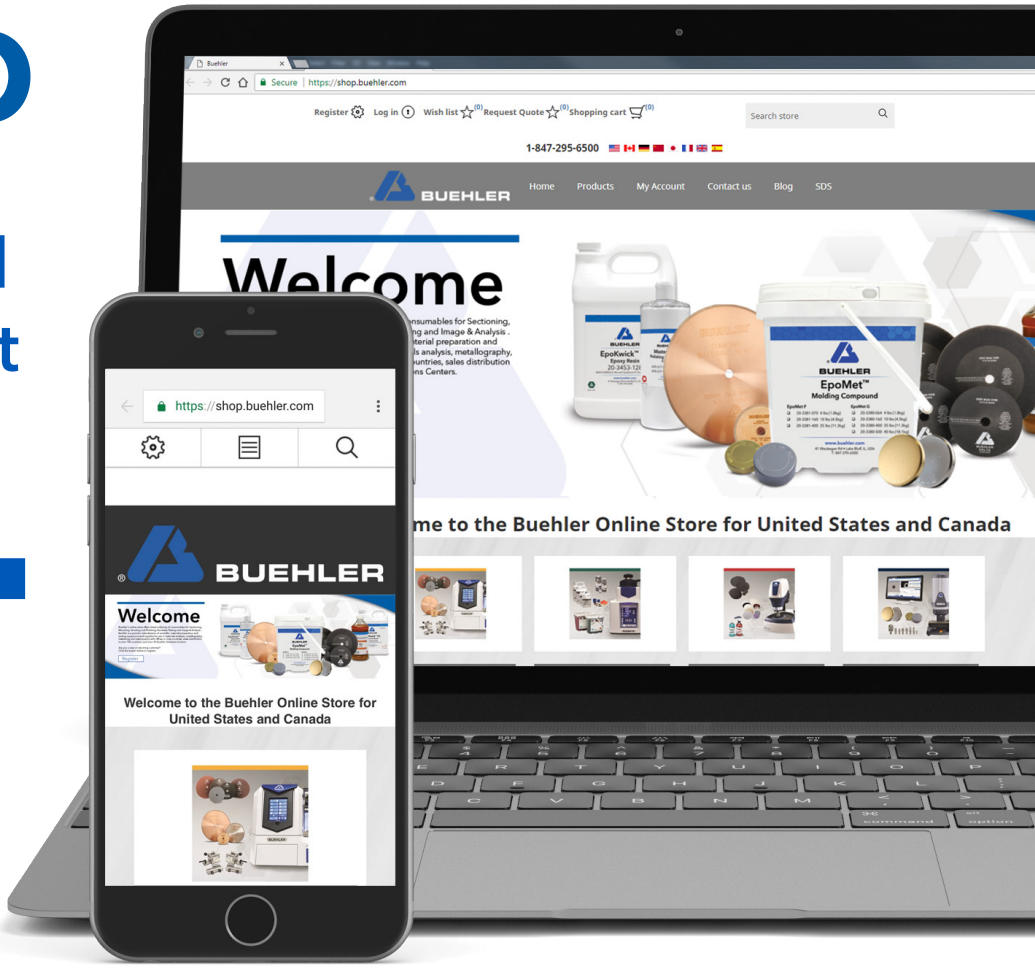


## Shop.Buehler.com

The online shop allows you to see a complete list of consumables and accessories, view pricing, and place orders via credit card or purchase order. Additional features include:

- View Detailed Product Information: SDS Sheets, Specifications, Inventory Status, Compare Tool.
- Wish List: Share your list of desired items or get approval on shopping list.
- Request Quote: Send in your request for equipment quotation.
- Review Activities: View Order Status, Transaction History, Recent Views.
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***Available in: US, Canada, Mexico, UK, France, Germany***

# POLISHING ORDERING INFO

*For full product listing, refer to the Buehler Product Catalog.*

## MetaDi™ Diamond Suspensions


### MetaDi Supreme Polycrystalline Suspension

| Color | Diamond Size | 8oz [0.24L]* | 32oz [0.95L] | 1gal [3.8L] |
|---|---|---|---|---|
| Charcoal | 0.05µm | 40-6627 | | |
| Grey | 0.25µm | 40-6629 | | 40-6629-128 |
| Blue | 1µm | 40-6630 | 40-6630-032 | 40-6630-128 |
| Blue | 1µm Fine | 40-6630F | 40-6630F-032 | 40-6630F-128 |
| Green | 3µm | 40-6631 | 40-6631-032 | 40-6631-128 |
| Green | 3µm Fine | 40-6631F | 40-6631F-032 | 40-6631F-128 |
| Yellow | 6µm | 40-6632 | 40-6632-032 | 40-6632-128 |
| Deep Red | 9µm | 40-6633 | 40-6633-032 | 40-6633-128 |
| Brown | 15µm | 40-6634 | 40-6634-032 | 40-6634-128 |
| Orange | 30µm | 40-6635 | 40-6635-032 | 40-6635-128 |
| Purple | 45µm | 40-6636 | | 40-6636-128 |

### MetaDi Monocrystalline Suspension

| Color | Diamond Size | 16oz [0.47L]* | 32oz [0.95L] | 1gal [3.8L] |
|---|---|---|---|---|
| Blue | 1µm | 40-6530 | 40-6530-032 | 40-6530-128 |
| Green | 3µm | 40-6531 | 40-6531-032 | 40-6531-128 |
| Yellow | 6µm | 40-6532 | 40-6532-032 | 40-6532-128 |
| Deep Red | 9µm | 40-6533 | 40-6533-032 | 40-6533-128 |
| Brown | 15µm | 40-6534 | 40-6534-032 | 40-6534-128 |

### Dye-Free MetaDi Supreme Polycrystalline Suspension

| Diamond Size | 8oz [0.24L]* |
|---|---|
| 1µm | 40-6730 |
| 3µm | 40-6731 |
| 6µm | 40-6732 |
| 9µm | 40-6733 |

### MetaDi Monocrystalline Suspension Oil Based

| Color | Diamond Size | 16oz* [0.47L] |
|---|---|---|
| Blue | 1µm | 40-6540 |
| Green | 3µm | 40-6541 |
| Yellow | 6µm | 40-6542 |
| Deep Red | 9µm | 40-6543 |
| Brown | 15µm | 40-6544 |

### MetaDi Combo, Suspension & Extender

| Color | Diamond Size | 32oz [0.95L] |
|---|---|---|
| Blue | 1µm | 40-5530-032 |
| Green | 3µm | 40-5531-032 |
| Yellow | 6µm | 40-5532-032 |
| Deep Red | 9µm | 40-5534-032 |

## MetaDi™ Diamond Pastes

### MetaDi Ultra Polycrystalline Paste

| Color | Diamond Size | 20g |
|---|---|---|
| Blue | 1µm | 40-1-6301 |
| Green | 3µm | 40-1-6303 |
| Yellow | 6µm | 40-1-6305 |
| Deep Red | 9µm | 40-1-6307 |
| Brown | 15µm | 40-1-6309 |

*This product is grey in color with color coded packaging*

### MetaDi Monocrystalline Paste *(Natural)*

| Color | Diamond Size | 5g | 20g |
|---|---|---|---|
| Grey | 0.25µm | 40-6112 | 40-6102 |
| Blue | 1µm | 40-6138 | 40-6128 |
| Green | 3µm | 40-6152 | 40-6142 |
| Yellow | 6µm | 40-6172 | 40-6162 |
| Deep Red | 9µm | 40-6192 | 40-6182 |
| Brown | 15µm | 40-6212 | 40-6202 |

### MetaDi II Monocrystalline Paste *(Synthetic)*

| Color | Diamond Size | 5g | 20g |
|---|---|---|---|
| Grey | 0.25µm | 40-6241 | 40-6240 |
| Blue | 1µm | 40-6244 | 40-6243 |
| Green | 3µm | 40-6247 | 40-6246 |
| Yellow | 6µm | 40-6250 | 40-6249 |
| Deep Red | 9µm | 40-6253 | 40-6252 |
| Brown | 15µm | 40-6256 | 40-6255 |

**8oz and 16oz are supplied with spray nozzle*

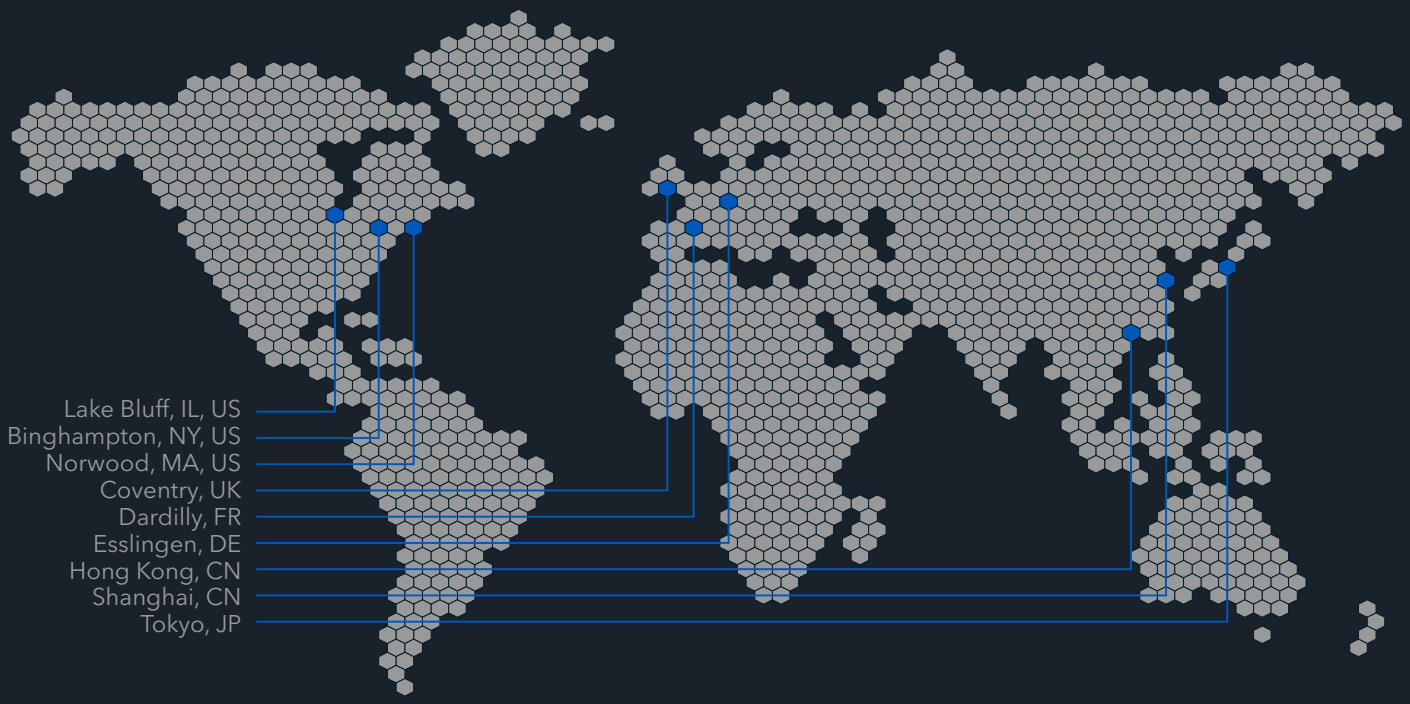
# Final Polishing Suspensions

| Description | Size | 0.02µm | 0.05µm | 0.06µm | 0.3µm | 1µm |
|---|---|---|---|---|---|---|
| MasterPrep™ Alumina | 64oz | | 40-6377-064 | | | |
| MasterMet™ Colloidal Silica | 64oz | | | 40-6380-064 | | |
| MasterMet™ 2 Non-Crystalizing Colloidal Silica | 64oz | 40-6380-064 | | | | |
| MasterPolish™ Final Polish | 32oz | | 40-10084 | | | |
| MasterPolish™ 2 Final Polish | 32oz | | | 40-6376-032 | | |
| MicroPolish™ Alumina Powder | 1lb | | 40-10075 | | 40-10077 | 40-10079 |
| MicroPolish™ Alumina Suspension | 6oz | | 40-10083 | | 40-10082 | 40-10081 |
| MicroPolish™ II Alumina Powder | 5lb | | | | 40-6323-080 | 40-6321-080 |
| MicroPolish™ II Alumina Suspension | 6oz | | | | 40-6363-006 | 40-6361-006 |

# Polishing Cloths

| | Cloth | Backing | Quantity | 8in [203mm] | 10in [254mm] | 12in [305mm] | Description |
|---|---|---|---|---|---|---|---|
| COARSE | UltraPad™ | PSA | 10 | 40-7118 | 40-7120 | 40-7122 | Hard woven, napless |
| | | Magnetic | 5 | 42-3008 | 42-3010 | 42-3012 | |
| | UltraPol™ | PSA | 10 | 40-7448 | 40-7450 | 40-7452 | Hard woven, non-aggressive silk |
| | TexMet™ P | PSA | 5 | 40-7638 | 40-7640 | 40-7642 | Hard non-woven, perforated |
| INTERMEDIATE | Nylon | PSA | 10 | 40-7068 | 40-7070 | 40-7072 | Medium hard woven, oil resistant, napless |
| | | Magnetic | 5 | 42-3108 | 42-3110 | 42-3112 | |
| | TexMet C | PSA | 10 | 40-1108 | 40-1110 | 40-1112 | Non-woven, pressed |
| | | Magnetic | 5 | 42-3208 | 42-3210 | 42-3212 | |
| | TriDent™ | PSA | 10 | 40-7518 | 40-7520 | 40-7522 | Soft woven synthetic, napless |
| | | Magnetic | 5 | 42-3308 | 42-3310 | 42-3312 | |
| | VerduTex | PSA | 10 | 40-8018 | 40-8020 | 40-8022 | Medium hard, synthetic silk |
| | | Magnetic | 5 | 42-3408 | 42-3410 | 42-3412 | |
| | VelTex | PSA | 10 | 40-8218 | 40-8220 | 40-8222 | Short nap, synthetic velvet |
| | | Magnetic | 5 | 42-3508 | 42-3510 | 42-3512 | |
| | WhiteFelt™ | PSA | 5 | 16-2002 | 16-2502 | 16-3002 | Soft, durable, matted wool |
| | PoliCloth | PSA | 10 | 40-8418 | 40-8420 | 40-8422 | Medium hard, woven wool |
| | | Magnetic | 5 | 42-3608 | 42-3610 | 42-3612 | |
| FINE | MicroCloth™ | PSA | 10 | 40-7218 | 40-7220 | 40-7222 | Soft synthetic rayon, long nap |
| | | Magnetic | 5 | 42-3708 | 42-3710 | 42-3712 | |
| | MicroFloc | PSA | 10 | 40-8318 | 40-8320 | 40-8322 | Soft, long nap |
| | | Magnetic | 5 | 42-3808 | 42-3810 | 42-3812 | |
| | MasterTex™ | PSA | 10 | 40-7738 | 40-7740 | 40-7742 | Soft synthetic velvet, low nap |
| | | Magnetic | 5 | 42-3908 | 42-3910 | 42-3912 | |
| | ChemoMet™ | PSA | 10 | 40-7918 | 40-7920 | 40-7922 | Soft synthetic, porous, chemically resistant |
| | | Magnetic | 5 | 42-4008 | 42-4010 | 42-4012 | |

# Buehler Worldwide Locations

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