

MICRO-ABRASIVE BLASTING NOZZLES AND ABRASIVE MEDIA



COMCO INC.

**Comfort right
at your fingertips.**



ComfortGrip[®] Handpieces & Nozzles

- **Patented design provides the ultimate in comfort and performance**
- **New ergonomic shape and cushioned grip for a natural feel that's easier for operators to hold**
- **Less resistance to motion for enhanced control and reduced fatigue**
- **Fewer parts in contact with abrasive eliminate expensive replacement**
- **Most popular nozzle sizes available: .018", .030", .046", and .060" ID**
- **Easily attached to the hose of most small abrasive blasters (fits 1/4" hose)**

Comco's Line of Hi/Performance Nozzles



Customers Report:

***"Up to 10 Times the Efficiency
with Comco
Hi/Performance Nozzles!"***

Our exclusive series of Hi/Performance nozzles is expertly engineered to provide longer life, better blasting characteristics and increased wear resistance 3 to 5 times that of conventional nozzles.

Comco's Hi/Performance nozzles deliver an accelerated abrasive flow with a tighter focus resulting in less overspray and a faster cutting time. Ideal for manual, fixtured or automated applications, the tight focus and long life of Hi/Performance nozzles will save you time and money.





Comco Nozzles: Quality & Performance

- **Manufactured with Premium Grade Tungsten Carbide for Longer Life**
- **Color-Coded System for Quick & Easy Nozzle Identification**
- **Quality Control to Ensure Repeatability with Every Blast**
- **Wide Variety of Nozzle Shapes & Sizes Plus Custom Designs**
- **Priced Affordably while Maintaining Quality & Precision**

Nozzles are an integral part of the micro-abrasive blasting system. They provide the focus and acceleration to the abrasive stream generated by the blaster. As dry air and abrasive powder pass through the nozzle, they are channeled into a concentrated pattern that enhances the cutting abilities of the specific media and the precision of the process itself.

Although the process seems simple, the quality and care we take in manufacturing each nozzle is a key component in the success of micro-abrasive blasting. The superior quality of our nozzles guarantees the highest level of repeatability with every blast.

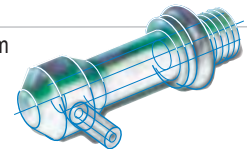
Comco Nozzle Specifications

PART #	COLOR	NOZZLE OPENING inch	NOZZLE OPENING mm
AccuFlo® Nozzles			
MB2520-18	Violet	.018"	0.46mm
MB2520-30	Green	.030"	0.76mm
MB2520-46	Yellow	.046"	1.20mm
MB2520-60	Red	.060"	1.50mm
Hi/Performance Nozzles			
MB1520-18	Violet	.018"	0.46mm
MB1520-30	Green	.030"	0.76mm
MB1520-46	Yellow	.046"	1.20mm
MB1520-60	Red	.060"	1.50mm
Straight Round Nozzles			
MB1500-28	Grey	.010"	0.25mm
MB1500-10	Silver	.015"	0.38mm
MB1500-24	Violet	.018"	0.46mm
MB1500-27 (thin wall)	Black	.018"	0.46mm
MB1500-37	Orange	.025"	0.64mm
MB1500-11	Green	.030"	0.76mm
MB1500-29	Yellow	.046"	1.20mm
Rectangular Nozzles			
MB1500-26	Orange	.008" x .020"	0.20mm x 0.50mm
MB1500-12	Blue	.008" x .040"	0.20mm x 1.00mm
MB1500-19	Red	.008" x .060"	0.20mm x 1.50mm
MB1500-20	Silver	.008" x .080"	0.20mm x 2.00mm
MB1500-22	Olive	.008" x .125"	0.20mm x 3.20mm
MB1500-23	Black	.008" x .150"	0.20mm x 3.80mm
MB1500-32	Blue	.012" x .150"	0.30mm x 3.80mm

PART #	COLOR	NOZZLE OPENING inch	NOZZLE OPENING mm
Extended Nozzles (1.5" Long) Round			
MB1503-1	Violet	.018"	0.46mm
MB1503-2	Green	.030"	0.76mm
MB1503-3	Yellow	.046"	1.20mm
Extended 90° Nozzles			
MB1504-6 (1 hole)	Yellow	.046"	1.20mm
MB1504-11 (2 holes)	Yellow	.046"	1.20mm
Angled Nozzles			
	45°	90°	
MB1502-3	MB1501-25	Violet	.018"
MB1502-5	MB1501-14	Green	.030"
MB1502-6	MB1501-28	Yellow	.046"
			0.46mm
			0.76mm
			1.20mm
PowerFlo® & DirectFlo™ Nozzles			
PF2110-1	Red	.060"	1.50mm
PF2110-3	Blue	.080"	2.00mm
PF2110-5	Red	.125"	3.20mm
PF2100-4 (rectangular)	Red	.008" x .150"	0.20mm x 3.80mm
PF2110-6 (rectangular)	Blue	.016" x .190"	0.40mm x 4.80mm

Custom Nozzles

Our skilled engineers can develop custom nozzles to fit your specific applications.



Our Technical Support Department can determine the correct nozzle for your specific application.

Comco Abrasive Media: Dry, Pure & Carefully Sized

Carefully Sized

It is essential that the majority of the media particles are located within a narrow size range. Fine abrasives cause clumping, creating flow bursts instead of a uniform stream. Coarse particles tend to clog in the nozzle or cause damage to the part being blasted.

At Comco we keep a tight classification to remove more of the fine and coarse particles from the distribution. Variation between particle size from lot to lot can also affect the consistency of a process. Most industrial abrasives allow for a significant amount of drift in their average particle size.

Free From Impurities

Foreign particles in the abrasive blend will cause unintended results. These contaminants may damage the underlying surface or affect the surface properties. Comco uses proprietary systems and tools to maintain the purity of all our powders, ensuring optimum performance.

Moisture-Free Processing

Fine abrasives attract moisture more easily due to the high ratio of surface area to volume. As water molecules stick to the surface they create a natural bonding agent between particles. This causes the powder to clump causing an inconsistent flow of abrasive and blockages. Proper moisture controls employed during the manufacturing process and special packaging ensure that all Comco abrasives are free from moisture contamination.








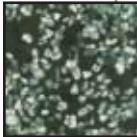


While powder from different manufacturers may look similar, there are subtle, but very important differences in manufacturing that ultimately affect the success of any application.



*Achieve consistent blasting results.
Demand the quality of Comco abrasives.*

A Guide to Media

The effect of an abrasive material is caused by its three characteristics: particle size, shape and hardness.

		PART #	PARTICLE SIZE Micron	PARTICLE SHAPE	HARDNESS (Mohs')
<p>Aluminum Oxide</p>  <p>The most commonly used cutting abrasive. The shape and hardness of the particle make it an excellent choice when working with metals or hard, brittle parts. Common uses include cutting, deburring and the preparation of surfaces.</p>		PD1001 PD1009 PD1012 PD1003 PD1029 PD1014	10 17.5 25 50 100 150	Blocky & Sharp	9
<p>Crushed Glass</p> <p>This media is manufactured by crushing glass beads. The result is a mild abrasive media with lots of shard-like edges. Crushed glass is used where only a light degree of abrading is desired.</p> 		PD1027	50	Blocky & Sharp	Between 5 and 6
<p>Glass Bead</p>  <p>Used where preservation of tight tolerances is critical combined with the need to relieve stresses. It is also used to perform light deburring or to apply a satin-like finish on a part. The spherical shape keeps it from cutting into surfaces, so it is commonly used to relieve stresses by "pounding" the part's surface.</p>		PD1030 PD1004 PD1033	35 50 100	Spherical	6
<p>Plastic Media</p> <p>Created by grinding and carefully sizing recycled plastic. Similar in size to walnut shell, it makes an effective tool to deburr machined plastic parts without causing dimensional changes. It can also be used to remove conformal coatings.</p> 		PD1035 PD1013	50 200	Blocky	Between 2 and 4
<p>Pumice</p>  <p>Pumice is a volcanic ash that is formed when lava is permeated with gas bubbles. Lava has similar properties and chemical make-up as glass, which makes it very abrasive. Unlike glass, however, pumice is a soft abrasive.</p>		PD1015	50	Blocky & Sharp	6
<p>Silicon Carbide</p> <p>The most aggressive media used for micro-abrasive blasting, with a hardness just under that of a diamond. Typically used where very fast material removal is a requirement. An excellent abrasive for deburring stainless steel and titanium parts.</p> 		PD1005 PD1006	20 50	Blocky & Sharp	9 +
<p>Sodium Bicarbonate</p>  <p>One of the softest abrasives. Needle-like or "monoclinic" shapes make it excellent for abrading pliable materials. Particles cut through soft surfaces where a blockier particle would tend to bounce off. It is used to selectively remove coatings on circuit boards without damaging components.</p>		PD1007 PD1031	50 100	Monoclinic	Between 3 and 4
<p>Walnut Shell</p> <p>Manufactured by grinding nut shells. It has a much larger size than sodium bicarbonate, approximately 200 to 250 microns. Walnut shell will quickly remove polymer coatings from circuit board surfaces and can also be used to deflash plastic parts.</p> 		PD1008	250	Blocky	Between 3 and 4

Nozzles and Abrasive Media for Every Application



- Cutting slots in silicon wafers for ink jet printer heads
- Cleaning mold tooling and extrusion dies
- Deburring laser machined fuel injector ports
- Deburring Swiss precision parts
- Removing magnesium oxide from thermocouples
- Engraving optical lens elements
- Trimming epoxy residue from probe rings
- Deburring hypodermic needles
- Removing laser slag on medical implant devices
- Cleaning aircraft turbine blade orifices
- Removing vestment material from dental implants
- Abrading polyurethane tubes
- Cleaning delicate fossils and artifacts
- Texturing flex circuitry
- Peening stainless steel instruments



Our experienced team of Sales Associates and Technical Specialists are ready to help you select the right nozzle and abrasive combination for your application.

Contact us today at 800-796-6626 or sales@COMCOinc.com

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