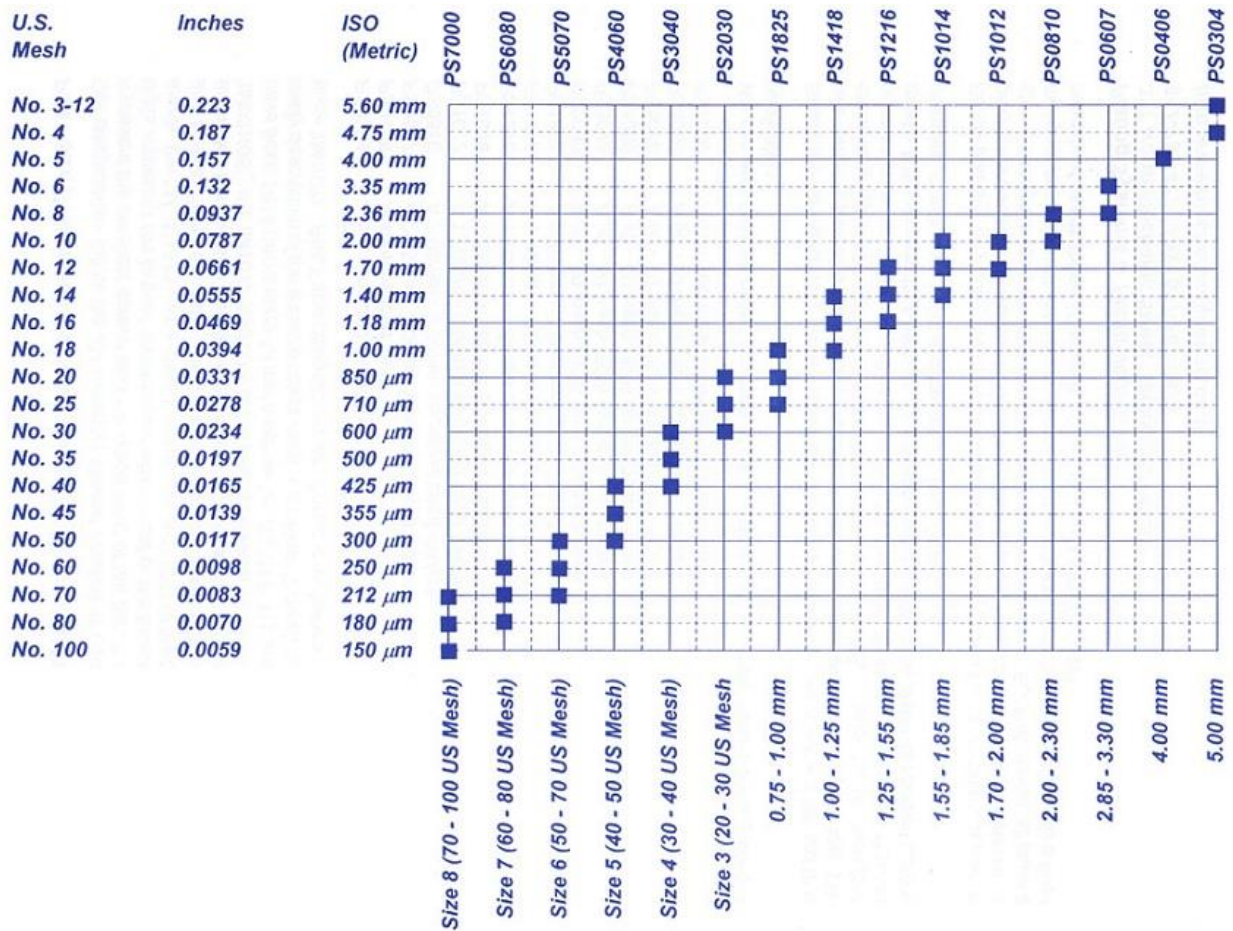




317 N. Mechanic Street, Jackson, MI 49201  
 Phone: 517-783-4776 ♦ Facsimile: 517-783-5875  
 E-mail: sales @mechanicalplating.com

## Size Chart for PS&T Impact Media (Glass Beads)



Sizes 3 to 8 refer to MIL-G-9954 "Glass Beads: For Cleaning and Peening." Mesh cross-references are from ASTM E11 "Standard Specification for Wire Cloth and Sieves for Testing Purposes."

Reminder: The **larger** the mesh size, the **smaller** the bead. Smaller beads are more likely to be flushed from the system and larger beads provide more mechanical energy.

## **PS&T Size Designations for Impact Media for Mechanical Plating and Galvanizing**

Our designations follow the 3M Industrial Mineral Product designations. The first two digits represent the smallest screen through which most of the beads will pass and the next two digits represent the largest screen upon which most of the beads will be retained. For example, the 3M IM1625 was a glass bead mixture with 80% of the beads larger than 25 mesh and smaller than 16 mesh. Their system was not as explicitly accurate as intended - for example 3M's 'IM0405' beads were molded 5 mm beads, so they probably should have been 'IM03½05'; the 'IM1013' had 80% of the beads between 10 mesh and 14 mesh, so it should have been 1014 (there is no 13 mesh defined by ASTM E-11); and obviously 'IM5050' is not really descriptive of the actual product which was 40 to 70 mesh, so that product should have been 'IM4070.' With the foregoing discussion complete, PS&T size designations are as follows:

PS0304	A 5mm molded bead
PS0406	A 4mm molded bead
PS0607	A 2.85mm - 3.30mm screened bead mixture
PS0810	A 2.00mm - 2.30mm screened bead mixture
PS1012	A 1.70mm - 2.00mm screened bead mixture
PS1014	A 1.55mm - 1.85mm screened bead mixture
PS1216	A 1.25mm - 1.55mm screened bead mixture
PS1418	A 1.00mm - 1.25mm screened bead mixture
PS1825	A 0.75mm - 1.00mm screened bead mixture
PS2030	A 20 - 30 mesh (80% range) bead mixture
PS3040	A 30 - 40 mesh (80% range) bead mixture
PS4060	A 40 - 50 mesh (80% range) bead mixture
PS5070	A 50 - 70 mesh (80% range) bead mixture
PS6080	A 60 - 80 mesh (80% range) bead mixture
PS7000	A 70 - 100 mesh (80% range) bead mixture

We can also "special order" any type of glass beads that you might require for any special application.

Beads are conventionally given a nominal size range. However, not all beads fall into that size range. Up to 20% may, by specification, be above or below the nominal size range. For example, a typical 20 - 30 mesh bead may have as much as 5% as large as 14 mesh (but none as large as 12 mesh) and as much as 15% finer than 30 mesh (but not finer than 40 mesh). If this represents a problem for a specific part type, then the plater can screen out the offending media sizes using appropriately sized screens.

Beads that are very fine (100 mesh and above) are quickly lost in most mechanical plating processes because of hydraulic flow - the lighter a bead is, the more likely that the flow will be strong enough to carry the bead into the waste treatment system. For that reason, all platers make up primarily with fine beads. Some have practices in which they routinely add a fixed quantity of beads (often 50 pounds or one bag) per barrel per week.

## MIL-SPEC BEAD SIZES – MINIMUM PERCENT ROUND AND PERCENT PASSING

U.S. Standard Screen (Read Down)	1	2	3	4	5	6	7	8	9	10	11	12	13
	60% Round	60% Round	65% Round	70% Round	70% Round	80% Round	80% Round	80% Round	80% Round	90% Round	90% Round	90% Round	95% Round
10	100												
12	95-100	100											
14	0-15	95-100	100										
20	0-5	0-15	95-100	100									
30		0-5	0-15	95-100	100								
40			0-5	0-15	95-100	100							
50				0-5	0-15	95-100	100						
60					0-5		95-100	100					
70						0-15		95-100	100				
80						0-5	0-15		95-100	100			
100							0-5	0-15		95-100	100		
120								0-5	0-15		95-100	100	
140									0-5	0-15	95-100	100	
170									0-5			95-100	100
200										0-5	0-15		
230											0-5	0-15	
325												0-5	0-15
400													0-5

Source: MIL-G-9954A "Glass Beads: For Cleaning and Peening." This is the Military Specification for glass beads. Many glass beads, even though no intended for military use, are sold by the MIL-SPEC sizing system.