

## Zinc and Xinquing Laps - User's Instructions Information from Gearloose

### A Cast Zinc Lap - done right!

Zinc Laps from Gearloose - introduced in April 2011.

Tin prices have risen 58% in the last few Quarters. This has of course impacted the prices of all tin laps, everywhere.

While I personally did not care for zinc as a polishing material, many Old Pros still like it and over the years have had me custom-make them. They had become accustomed and proficient with these laps years ago, and preferred them for things like sapphire, as well as some prepolishing.

I did not prefer them for polishing, so never really pursued it. I thought it was "Grabby" and harsh, and difficult to use.

There was no such argument from me about its ability to make fast prepolishing with 3000 or 8000 diamond, though. It is more aggressive and faster than the tin alloys. The recent Tin Price Crisis forced me to do so, and I have learned a lot, some of which was surprising.

1. It is doubtful if anyone in fact ever used a zinc lap. Pure zinc, 0.999+, is not a regular item of manufacturing commerce. It is supplied in ball form to manufacturers of alloys. I have been doing business with a lot of metals suppliers for years. There is no such thing as 0.999 zinc rolled plate.
2. Nearly all zinc in commerce is actually the ZAMAC Alloys, principally Zamac 3 and Zamac 12 (Zinc, Aluminium, Magnesium, And Copper). These alloys have a superplastic range that allows precision, intricate die castings in net shape to +/- 0.002". Zamac 12 serves as a better sleeve bearing than bronze, and is mechanically very strong. But a lot of aluminium in polishing laps is a bad idea.

These Cast Zinc Laps are not recycled old carburettors and hard drives thrown into a melting pot. My primary refiners or dealers are US ISO 900x companies, conforming to ASTM B240-10 and B86 Specifications. ie. No Junk! Pb (Lead): < 00.0035 and Cd (Cadmium): < 00.001.

The BATT™ and BA5T™ tin laps have become standards in their own right, and will always be manufactured, but the tin price insanity demands that I offer my customers more choices.

### Usage Tips:

Users have found this special zinc alloy prepolishing lap is VERY fast and aggressive, and that 8K diamond may be a better choice than the usual 3K prepolysh.

3K cuts on this lap.

An 8K Diastik™ is now available for this lap.

For many years, zinc laps have been a popular choice with professional cutters for harder stones such as corundum (sapphire/ruby), CZ, chrysoberyl, spinel, etc.

Feedback on Gemology Online so far (see links below) suggests that #8k is the sweet spot for pre-polish (#14k offers little advantage while #3k cuts quite aggressively).

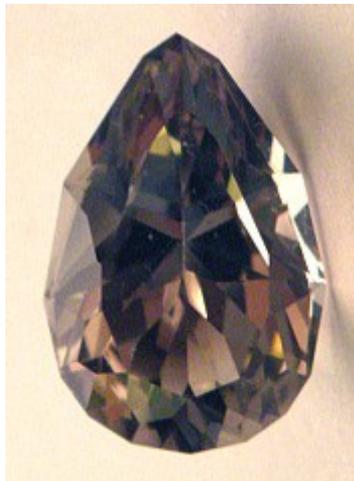
You may find operating at a slightly higher speed to be beneficial. Lap breaks in quickly. Compared to a BATT lap, the zinc laps are a little harder and more aggressive and do not take a deep charge. Therefore, do not load up too much diamond - aim for a monolayer and recharge as necessary.

Relevant discussions on Gemology Online:

- <http://www.gemologyonline.com/Forum/phpBB2/viewtopic.php?f=8&t=13449>
- <http://www.gemologyonline.com/Forum/phpBB2/viewtopic.php?f=8&t=13650>

### Xinquing Laps:

The Zinc laps are also produced as a dual lap with either Darkside or Greenway centre for polishing. Same principals apply as above - recommend #8k diamond as pre-polish on the outer Zinc ring with your polish of choice in the centre.



Smoky Quartz cut by Jon Rolfe - 11.36 mm X 17 mm, 8.45 carats . Cut on a #600 plated lap and then finished on the Xinquing lap.

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