

## METOTOP® LE-812 – The Micro Drill Entry Board

„LE“ stands for „Lubricating Entry“. That's exactly the best description why this entry board makes the difference and turns out to be the best available drilling entry for micro hole drilling.

Dort wo andere Bohrdecklagen versagen (zu dick, zu instabil, zu großer Bohrerdrift) sorgt LE-812 für einwandfreie Bohrergergebnisse bei Bohrungen unter 0,30 mm

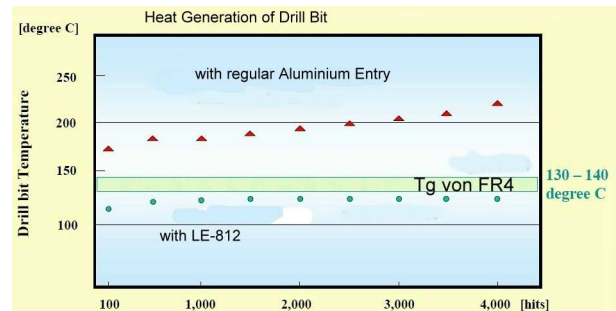
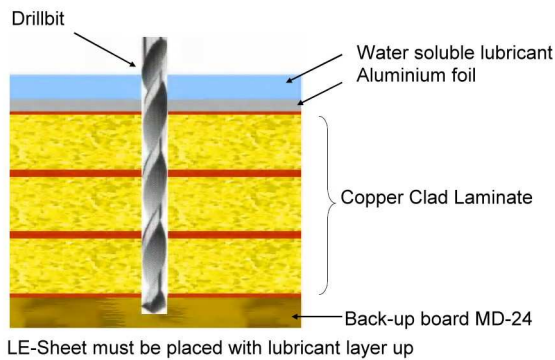
We offer type LE-812 optimised for drilling holes from 0,1 mm on laminates from 0,4 mm thickness. For thinner laminates and hole diameters from 0,075 mm we recommend type LE-808-D2.

LE-812-is a compound of 120 µm special alloy aluminium as carrier and 40 µm water soluble lubricant

**The built up of the entry board is as follows:**

<b>Lubricant</b>	: 40 ~ 200 micron
<b>Aluminium</b>	: 70 ~ 150 micron

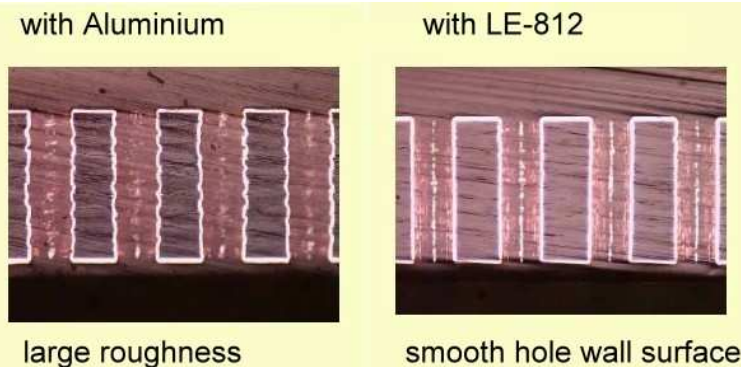
**Usage:**



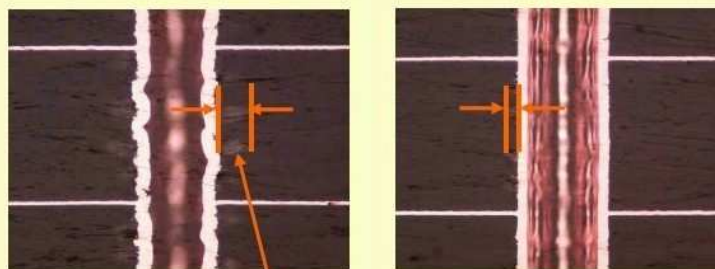
The unique impact of LE-812 while drilling ist he significant reduction of drilling temperature below Tg of FR4, thus **improving hole wall quality** and increasing drill bit life

**Hole wall roughness**

0,3 mm hole  
 0,8 mm deep  
 3 layers FR4

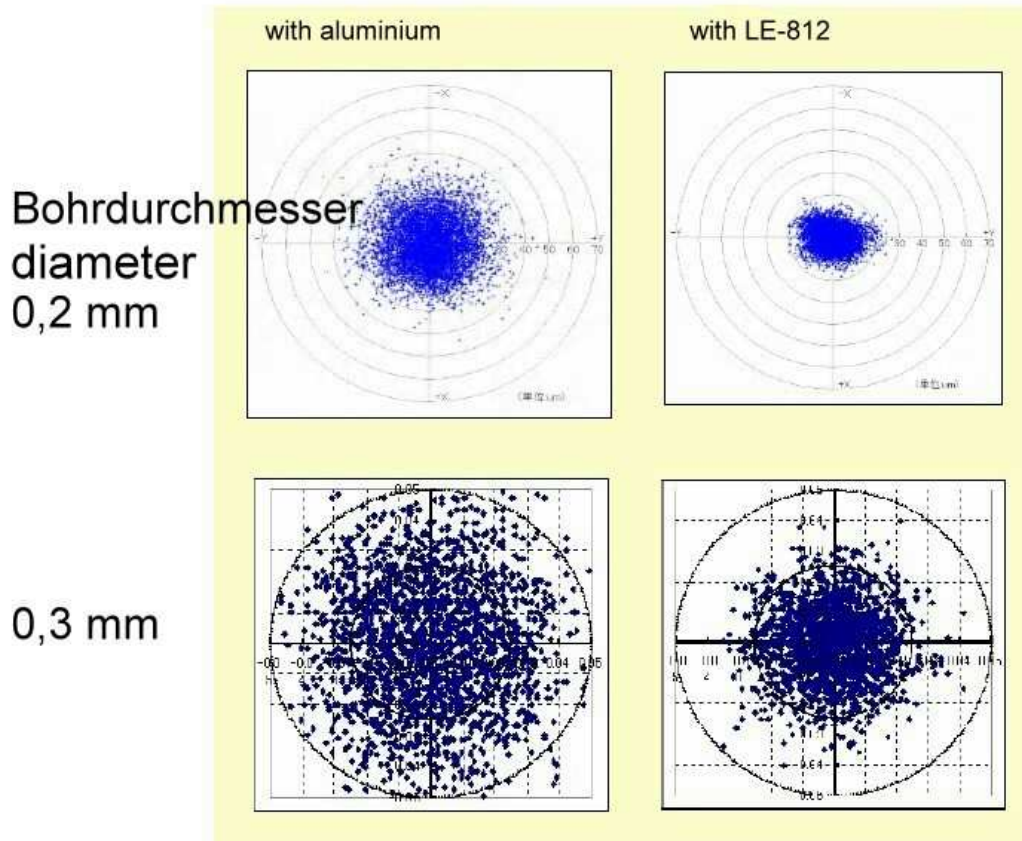


0,25 mm hole  
 1,0 mm deep  
 3 layers FR4



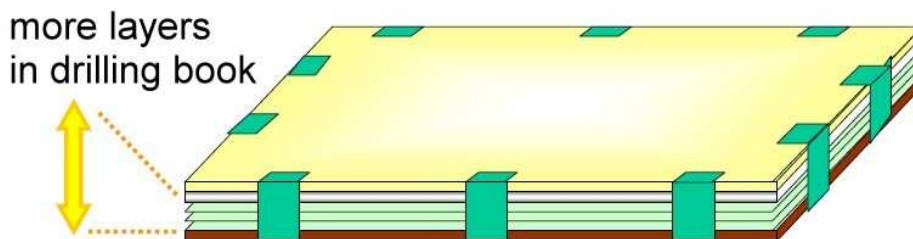
this part cannot keep reliability of interconnect due to large penetration

**Significant increase of drilling accuracy:**



**More layers in your drilling stack:**

LE-812 esp. If used with our METODRILL back-up boards can increase the drilling stack and significantly can **reduce cost per hole**:

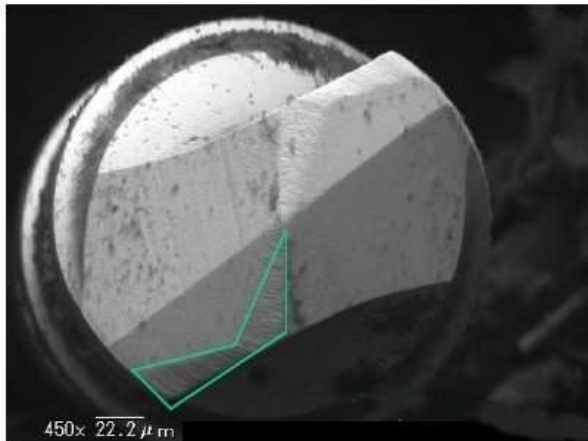


During drilling tests these data have been confirmed:

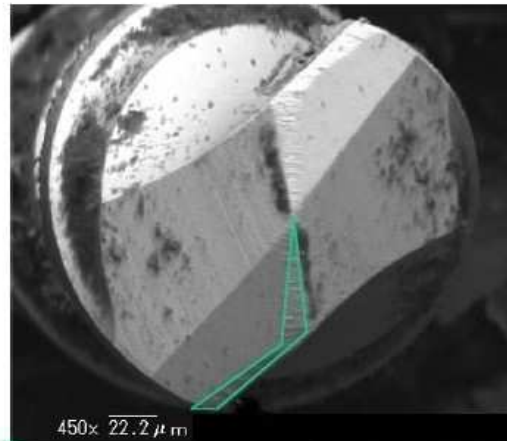
Material: BT (CCL: HL-832 – 0,2 mm 12 / 12				0,1 mm 12 / 12
Hole diameter	0,25 mm	0,20 mm	0,15 mm	0,1 mm
Aluminium	5	3-4	3	drill breakage
<b>LE-812</b>	<b>12</b>	<b>8</b>	<b>5</b>	<b>3</b>

## Reduced drill wear

Aluminium 0,15 mm



LE 812



## LE-812 significantly reduces drill wear

Photos show 0,2 mm drill tip after 3000 hits drilled on  
CCL H 832 - 0,2 t, 12/12 6 layers, surface speed 150000 rpm

## Summary

METOTOP® LE-812 offers a range of advantages compared with common drilling entry boards:

- Excellent drilling result with through drilled holes
- Reduces hole wall roughness, less micro cracks
- Less penetration of plating solution
- Less smear occurring
- Excellent drilling accuracy
- Reduced drill breakage
- Reduced drill wear esp. in combination with METODRILL® back-up boards.
- Increased drilling stacks
- Reduced cost per hole

The water soluble lubricant is easily removed by rinsing.

### Recommended storing conditions:

- Storage temp from 18°C to 25°C
- Rel. Humidity about. 40 – 60% rH
- Horizontal storage, flat
- Protect against humidity

**We offer METOTOP® LE-812 in panels cut to size  
standard sizes 455 x 612 and 512 x 612, other sizes available upon request**

The above statements are based on our present knowledge. Our statements should not be interpreted as a guarantee of characteristics. The use of our products by our customers is subject to different conditions, therefore none of our customers are relieved of the responsibility of testing our products by themselves. A liability for consequential damage will not be accepted in any case. For damage resulting from the use of this information we can only be held responsible if there is evidence of malice or negligence on our part. This data-sheet replaces any previous data sheets.

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