

# Best practices

## Polishing Toolox®



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SSAB Oxelösund is neither an expert nor a supplier of polishing. We by no means claim to have found the optimum solutions, but we are happy to share the experience from our partner.

# When polishing Toolox:

1. Honing with coarse honing stone, for instance grain size 120. All marks of milling or EDM is here worked off completely. The work is preferably done with a flat side of the honing stone to achieve as flat an even surface as possible. Vary the directions of the honing (in X-shape). This helps when it comes to get an even surface, and at the same time more efficient and thereby time saving work is done.
2. Honing acc. to above, but with fine grain, for instance grain size 320. All remaining marks left by the previous honing (in step 1) are here completely removed.
3. Rough polishing with diamond paste on a brass piece. Grain size 45 microns ( $\mu\text{m}$ ). This is continues until all remaining traces of the previous honing in step 2 are completely removed.
4. Acc. to step 3, but with 15  $\mu\text{m}$  diamond paste. Continue until all remaining traces from step 3 are removed.
5. Acc. to step 4, but with 7  $\mu\text{m}$  diamond paste. Continue until all remaining traces from step 4 are removed.
6. Polishing with 7  $\mu\text{m}$  diamond paste on fibre or plastic element. Continue until all remaining traces from step 5 are removed.
7. Polishing with 3  $\mu\text{m}$  diamond paste on fibre or plastic element. Continue until all remaining "nuance differences" from step 6 are completely removed. (We here use the term "nuance" since the surface by now is so fine that one hardly can talk about any, for the naked eye, visible scratches anymore).
8. Polishing with 3  $\mu\text{m}$  diamond paste on felt element. Continue until all nuance differences from step 7 are removed.
9. Final polishing with 3  $\mu\text{m}$  diamond paste and cotton. This is manual work, and now the final gloss is given. Continue until an even gloss is achieved over the entire surface.



**TOOLOX®**  
PREHARDENED TOOL & MACHINE STEEL

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# Best practices

## Polishing and texturing Toolox®

# To consider when polishing Toolox:

### Be thoughtful!

As every step is performed, remaining marks and scratches from the previous step must be completely removed. For example: Say that step 3 above is not done good enough, and you in the following step (4) see scratches remaining from step 2, attempts to remove them will fail. The only thing to do is to go back to step 3 and to this step again until it is completed. There are no short cuts!

### Keep clean!

Between every step the work piece, and everything that comes in contact with it, must be completely cleaned so that no coarse particles from the previous step comes in contact with the surface. For example: If diamond paste from step 4 (15 micron) remains as the polishing in step 5 begins (with 7 micron paste), the coarser grains from the 15 micron paste will give scratches no matter how much polishing is done with the finer paste.

### Don't over-polish!

Excess polishing with a soft material (felt, for example) can easily cause an "orange peel" surface. It is often tempting to polish "a little extra" on areas where perhaps remaining scratches from previous steps are seen in order to get rid of them, but this can easily create an orange peel surface in this area. Furthermore, also the finest diamond paste works of some material, and that means that a local - more intensive - polishing, will give waviness on the surface.

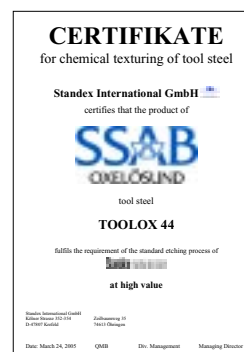
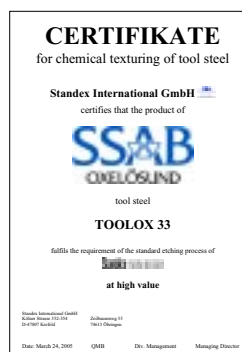


Half the central part is re prepared after claim of "orange surface"

# Texturing Toolox:

### Standex certificate Toolox 33 & Toolox 44

Toolox is a homogenous material, with properties as ESR remelted material. Because of its homogeneity Toolox is well suited for texturing. We have acceptance from different texturing companies like Standex, Surface etching cooperation group etc



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