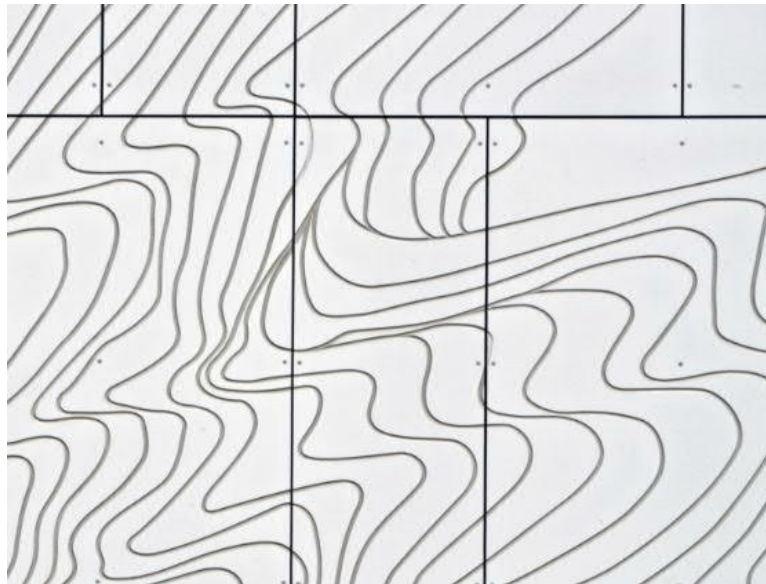


## 1. Introduction

This guideline is to assist in the design of engraving EQUITONE facade panels. Engraving may take many forms the only restrictions are the designers imagination. These guidance notes form the basic recommendations however for complex designs we would always recommend discussing this with ETEX Exteriors technical.



## 2. Design Advice

- Panel characteristics strength of panel may be reduced as a result of the engraving design
- A closer spacing of support frame may be required
- Extra care when handling, transporting or storing engraved panels
- Coating of the engraving may be required after fabrication
- It is not recommended to engrave EQUITONE [lines] due to risk of chipping the ridges
- Engraved panels cannot be used for a roof application

### 3. Panel Characteristics

EQUITONE panels with a high engraving rate may have other values for their technical characteristics due to local stresses. However this does not mean that they cannot be used. Highly engraved panels will result in less suitability for high windload areas. Therefore the panel may not be subjected to the same wind loads. The project design team engineer may need to model this to evaluate the real life conditions.

### 4. Support Structure Design

The grid of the fixing locations must meet the requirements for the facade. The engraving position must respect these locations and respect the exclusion zones for engraving around the fixings. See Item 8.

### 5. Areas of Application



Engraved panels can be used both internally and externally. Engraved panels cannot be used on a roof application. It is recommended that the engraving areas on EQUITONE [natura], [natura] PRO, [pictura] are treated with Luko solution. It should be noted that the Luko leaves a shiny coating when applied. Due care should be adopted when sealing the panel with LUKO to prevent panel staining.



After engraving remove all dust from the edges/face using an airline or microfibre cloth



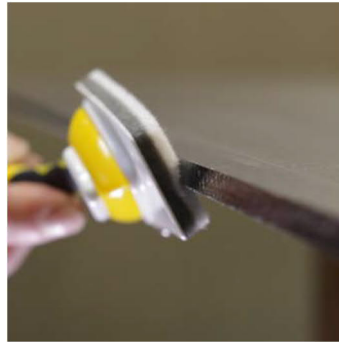
Apply the Luko between +5°C and 25°C.  
Treat one panel at a time.



Simply pour only enough Luko into the clean tray that can be used within 30 mins.  
Do not pour any leftover Luko back into the container.



Use a small sponge, small roller or brush by dipping into the liquid and removing any excess.  
Protect the surface of the panel from drips as any drips will be seen and cannot be removed once dried.



Simply run the sponge, roller or brush along the engraving. Ensure full coverage of the engraving.  
Repeat process if necessary.



Immediately wipe away any excess that appears on the panel surface. Failure to do so will result in stain that cannot be removed.  
Use a different colour cloth or recyclable paper towels - Do not use micro fibre cloth that was used to remove the dust.

For EQUITONE [tectiva] and [lunara] the engraving areas deeper than 1mm should receive a hydrofobation solution coating. We recommend Funcosil SNL available from Remmers or Antipluviol W available from Mapei.

This can be applied by spraying, brush or roller, refer to manufacturers recommendations and application instructions.

It is not recommended to engrave EQUITONE [lines] as damage could occur to the ribs when cutting through them.

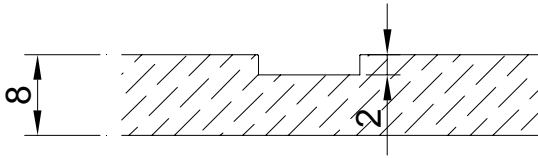
## 6. Engraving

Engraving can be done using drycut CNC (Computer Numeric Control) machines. This allows a greater degree of accuracy and speed as the machine is programmable. Only CNC machines with suitable dust extraction systems are suitable. Diamond, carbide or tungsten carbide tip/teeth/tools are recommended. Feed rate and spindle/cutting speed are all dependent on the machinery and cutting tools used. We would recommend a full trial is undertaken to check the quality of the engraving/cutting. When engraving the panel it is recommended to engrave to the majority of the board face, large localised engraving only may upset the equilibrium of the board and could cause bowing or curling'.

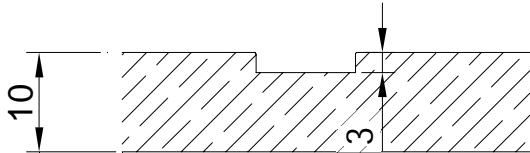
When engraving coated EQUITONE materials the cutting tool must always be sharp otherwise there is a potential risk of the coating lifting over time if the engraving is ragged or uneven or of damage to the coating.

Other methods are possible - these can include water jetting, medium blasting or laser cutting/engraving. It is recommended to fully trial any engraving method and adopt all relevant safety requirements.

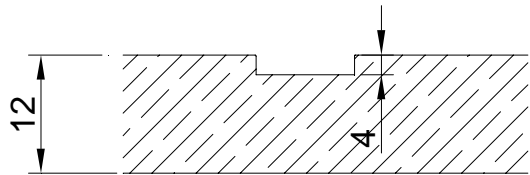
## 7. Engraving Depth



For 8mm EQUITONE panels the maximum recommended engraving depth for external applications is 2mm. This may result in closer framing spacing.



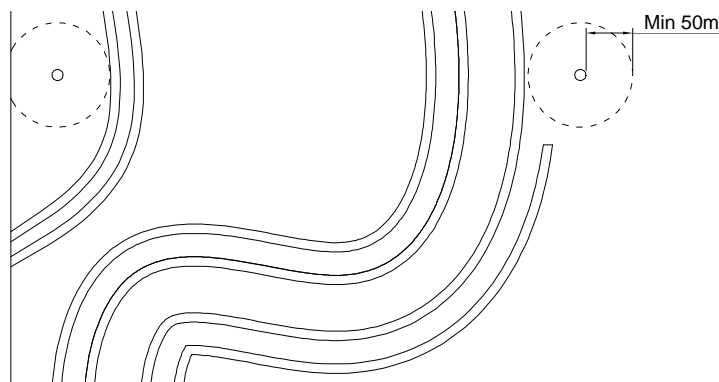
For 10mm EQUITONE panels the maximum recommended engraving depth is 3mm. This may result in closer framing spacing.



For 12mm EQUITONE panels the maximum recommended engraving depth is 4mm. This may result in closer framing spacing.

## 8. Fixing Positions

If using mechanical secret fixing/undercut anchor systems the minimum distance between the fixing and engraving is 50mm.



Mechanical Secret fixing minimum distance to engraving pattern

Note that with UNI Rivet face fixings, the rivets will not sit flush with the surface of the engraved parts due to the rivet sleeves.

For random shaped engraving we advise that a drawing is provided and submitted to ETEX Exteriors showing the panel with the size and shape of the engraving. Full façade elevations are also needed. The wind load must also be provided.

## 9. Storage, transport, handling

Extra care and attention will be needed to protect the panel during storage, transport and handling. An engraved panel may be more prone to braking if extra care and attention is not given. A system may be needed to be put in place during the drilling and packing of the engraved panels. If necessary the board can always be reinforced by using additional supports.

## 10. Additional Information

Additional information or other application guides can be found on the website or can be obtained from local support. Information about external suppliers can also be downloaded from the local websites.

### Disclaimer

The information in this Technical Note is correct at time issuing. However, due to our committed program of continuous material and system development we reserve the right to amend or alter the information contained therein without prior notice. Please contact your local EQUITONE Sales Organization to ensure you have the most current version.

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