



GRAVOXAL

ENGRAVING and COLOURING TIPS



Updated : 17/11/2000

Gravoxal is an anodised aluminium. Its remarkable resistance gives it its outdoor resistance.

CUTTING GRAVOXAL

We advise you to use a saw.

Or a Table shear only for the 0.5 and 1mm thick Gravoxal (possible use of the corner shears CSC for 0.5mm).

Circular saw
VA 1 # 68 000 000
VA 11 # 68 001 000

We recommend you to cut the plate in the direction of the brushing for best results.

ENGRAVING GRAVOXAL

- **CLAMPING GRAVOXAL** : It can be clamped according to its shape and dimensions on a **clamping table** or on a vice with **celoron or aluminium jigs** (for small pieces).
(The vacuum table is not recommended when you use lubricant)
For batch production, use the mechanical stop.

Caution : when you engrave several lines on a 0,5 mm thick little piece of material, the regulating nose can hit the sides of the jigs. Thus the top part of the letters would not be engraved. You must remember to turn the jigs where the shoulder is the lowest (0,8 mm high).

- **VERY IMPORTANT** : you have to lubricate during the engraving operation.
Apply the lubricant with a brush.

Lubricant
06 429 000

- **ENGRAVING WITH A CUTTER**: preferably use a regulating nose.
Caution :
- engraving with a pantograph : you should not apply strong pressure on the spindle
- engraving with an electronic machine : We advise you to release the spindle spring half way.

You can use a high frequency spindle or a collet spindle.

- **ENGRAVING WITH A DIAMOND** : (in this case, the engraving depth only enables colouring with Gravoxide). The pressure of the spindle spring defines the width of engraving.

- Engraving with a pantograph : constant average pressure.
- engraving with an electronic machine : we advise you to release the spindle spring half way.

Caution : Do not use a regulating nose when using a diamond.



TOOLS :

- **Cutter** : the carbide cutter is more adapted.

Grinding	
Cutting angle	40°
Half-taper angle	18°
Tip angle	7°
Clearance angle	15°

Type of tools	<u>Carbide</u>
∅ 3.17	05 410 xxx
∅ 4.36	58 101 xxx
TwinCut® Insert	B7 300 xxx

warning : these parameters are only valid with Gravograph's standard cutters.

NB : The size of the tip depends on the engraving width you wish to obtain.

- **Diamond** : tracing diamond

Type of tools	<u>Diamond</u>
∅ 3,17	05 412 317
∅ 4,36	58 102 436
Insert TwinCut®	B7 600 317

MACHINE PARAMETERS :

	Speed (mm/s)			Dwelling time	Engraving depth
	Z	X-Y	Rotation (Revolution / mn)		
CUTTER DIAMOND	5 35	8 to 20 35	18 to 20 000 Without motor	0.2 0	0.3mm* spindle pressure

*depth appropriate for colouring or for application of wax.

If you decide to leave aluminium colour visible, a 0,05 mm depth is sufficient

Whatever tool you use, we advise you to realise :

- 1 pass at the total depth when you use lubricant
- 2 passes when you do not use lubricant in order to clear the shave.

COLOURING GRAVOXAL

Before beginning to colour the plate, you have to remove the lubricant with a degreaser.

For best results, it is possible to colour Gravoxal.



- ❖ **Painting** : apply it with a flat spatula that will not scratch (a piece of Gravoply or bristol) or fill the engraved characters using a syringe (very practical to colour the bottom of the characters when the engraving is deep)



Never apply 2 coats

Clear away the excess with a clean spatula

Leave to dry for 40 mn

Clean with application diluant *

Leave to dry for a few hours.

* Wrap a piece of soft cloth that does not contain any wool round a wedge. Soak it with application diluant. Lightly rub down your plate to clear away the excess paint.

Gravolaque
87 400 0xx

Degreasing agent
L0411000

Application
diluant
.87 413

*Professional
tip*

We recommend the use of Gravograph's paint to avoid an ink or paint incompatibility with the protection varnish.

GRAVOXAL 2

- ❖ **Aloxide** : (on plates engraved with a cutter or a diamond, mainly for small characters)

Apply with a cotton bud or a piece of cone-shaped paper (pointed end) on the engraving

Rinse with water in order to clear away the product.

Quickly clean with a soft cloth

Aloxide
58 477



CAUTION : We advise you to use aloxide only on the glossy Gravoxal. The use of this product on the matt Gravoxal may lead to stains on the material.



- ❖ **Cold wax** : (on plates engraved with a cutter)

First lightly heat the tip of the wax to soften it and apply on the characters

Clean with absorbent paper (such as kitchen paper)

Cold wax
06 710

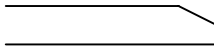
Or wrap a piece of soft cloth that will not scratch round a wedge.

Professional tip

FINISH

BEVELLING : Use the B4 or B6 machines (depending on the thickness) to enhance the finish of the plate, to obtain different types of bevelling according to your requirement.

Example :



We advise you to do several passes when bevelling thicker materials

B4 : #.00 014 001
B6 : #.00 014 101