User's guide
Acrystal Decor Metal

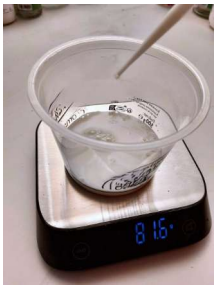
Weighting

All ingredients must be weighed :

- **1 part Acrystal Prima liquids**
- **5 parts Acrystal Decor Metal powders**

1. first weigh the Acrystal Prima liquid in the mixing bucket.
2. (optional) add retarder.
3. Acrystal Decor Metal powder must be weighed in a suitable separate container.


Acrystal Prima liquid


Retarder (optional) Prima


Acrystal Decor Metal powders

Mixing

- Use a high shear mixing blade to limit the incorporation of air, at a speed above 700 rpm to create a vortex and break up lumps.
  1. blend the liquids (Acrystal Prima + retarder) for 15 to 30 seconds.
  2. continuously mix liquid creating a vortex and slowly add the powder.
  3. continue mixing until a lump free cream consistency is obtained.
  4. (optional) if required incorporate thixotrop at the end.
  5. leave for a few moments to clear any bubbles.

Acrystal Decor Metal batch mix is ready for use.


High shear mixing blade


Mixing of the liquid part


Incorporation of Acrystal Decor Metal

Use

Minimum using temperature 12°C

- Pot life at room temperature of 17-20°C :
  - 8 to 10 minutes without retarder
  - up to 90 minutes with retarder
- The indicated times increase with the age of the products without affecting the quality of the finished product.
- The times indicated decrease at higher temperatures.


Casting


Laminating


Coating


Spraying

Setting

- The mix will thicken and the exposed surface become matt.
- Then the temperature will rise..
- Once the item has returned to room temperature the process is finished.

Demoulding

- Demoulding is possible after 20 minutes to 2 hours depending on the size and the shape of castings and laminatings.
- Take off any excess material directly after demoulding.

Curing

- Leave the item to air dry in a suitable area.
- No heating is required to cure.
- 90 % of the hardness is achieved after 6 hours at 20°C.
- After 72 hours the item is completely cured.

Finishing

Imperative : After removing from the mold, allow the object to dry for at least 48 hours before any finishing operations.

► After demolding, the Acrystal Decor Metal object is dull and matte.

► Remove the resin film on the surface by polishing with a steel wool pad (type 000 to avoid scratches), until the metal particles become visible.

Attention : This is not abrasion, but simply the removal of a thin surface film.

► Apply a colorless or tinted furniture or shoe wax and let it sit for a few minutes. This process not only makes the metal shiny but also prevents the natural oxidation of the metal particles.

► Polish using a soft cloth, a soft brush, or a polisher.

Tips and tricks
Acrystal Decor Metal

Silicone moulds

- The ideal mould for Acrystal :
  - it doesn't require any release agent
  - it remains perfectly clean by demoulding
  - as there is no solvent and low exotherm, its life time can be multiplied by 50 compared to polyester castings

Solid moulds

- Take off a maximum porosity on the surface in contact with Acrystal.
- Apply an adapted release agent like a professional release wax.
- Acrystal Prima has a low expansion when setting (< 0,1%). In order to be able to take off the item after setting, it is imperative to have : :
  - either sufficient demoulding angles (> 2°)
  - or demountable parts or parts you can open

Oven drying

- Acrystal ideally dries in open air.
- To accelerate this process, you can place your Acrystal item in a drying oven, always under 40°C, to ensure slow drying and avoiding any humidity in the heart of he moulding.

Colored waxes

- Furniture wax can be replaced with colored shoe wax. This allows you to create different shades on bronze, copper, or tin.

Acrystal Finition

- Acrystal Finition can be used to avoid the oxidation of the metal. The addition of some drops of pigments also provide special color effects.

Oxidation of the bronze

- Acrystal Decor Bronze can be oxidized by foundry methods.
- A solution can be made by dissolving ammonium chlorite in water (10% ammonium chlorite in 90 % water) and apply it on the surface to oxidize.
- After the chimical oxidation, it is important to stop it by cutting the surface from the contact with air, by applying a varnish or a wax.

Fluidity

- Acrystal Decor Metal may be too thick for some castings. In this case, it is possible to add a little water or Acrystal Prima resin in small doses: 1-2% maximum of the liquid's weight.

Lumps

- Getting lumps at the end of mixing is only due to a low mixing speed.

Screws and inserts

- Use only stainless steel screws and inserts to mechanically fix Acrystal objects.

Rotomolding

- Acrystal Décor Metal is perfectly adapted to rotomoulding in a closed mould. If necessary, add some thixotrope to the mix.

Gel coat

- When Acrystal Decor Metal is used in gel coat, it is strongly recommended to tint the Acrystal Prima used as a base in a color close to that of the gelcoat in order to hide any imperfections.

Usual degassing

- Acrystal Prima you don't need any particular degassing material.
- At the end of mixing let the product rest a few seconds before using it. To take off bubbles faster you may tap the mixing bucket.
- In case of casting, put by brush some Acrystal on the mould sides before casting the item. This prevents from getting bubbles on the surface.
- Cast Acrystal in your mould in a thin trickle to prevent air bubbles forming during the filling.

Put by brush some Acrystal on the mould sides to prevent getting bubbles on the surface.

Spraying

- Acrystal Décor Metal can be sprayed with any type of gun.

Imperative :

- A nozzle of at least Ø 4 mm
- Retarder to avoid setting of the product in the gun
- Thixotrope for setting on vertical parts of the mold or foam support.

Shelf life of the products

- Acrystal Prima liquid has a shelf life of one year.
- Acrytal Decor Metal powders have a shelf life of two years.

Important :

- By consistently closing your buckets and containers, the product will last for many years.
- Over time, the initial setting time will be slightly longer, but this will not affect the quality of the finished product.