Acrylic One is a water based resin system and is suitable for making art & art objects, panels, facade ornaments & facades, panels, supporting molds, decorations, design furniture and more.

Acrylic One’s special composition makes it easy to use, environmentally friendly, fire resistant and has good weather resistance properties.

Acrylic One can take on any shape or form. Which means it is suitable for making manually formed shapes and enables an artist or architect to produce “One of a kind” products.

Acrylic One is also very suitable for making product ranges, by using casting or laminating in any desired quantity.

Acrylic One looks like ivory stone and is as hard as composite. Colours are available to give it special looks.

Read more about how to work with Acrylic One and which additives and fillers are available in this user manual.

Weighing and mixing

Acrylic One must be carefully weighed and mixed. The mixing ratio of Acrylic One is 2 parts powder mixed with 1 part resin. Fill the beaker or bucket with the required amount of water. Use the stainless steel High Shear Mixer to create a swirl. Then add the correct amount of powder into the swirl. Continuously mixing until a smooth mixture is achieved without lumps and continue to mix for an additional 30 seconds approx. Ensure that none of the material sticks to the bottom and sides and that everything is included. Mix the Acrylic One resin in with the powder until a smooth mixture is obtained. Apply the gel coat layer in the mould of at least 1 mm layer thickness, with a brush or other tool. After the gel coat has set, which takes 20 minutes, you need to proceed the job within one hour to make sure the gel coat and the underlying material achieve optimal adhesion.

Processing time

The standard processing time after mixing is 20 minutes. When a shorter or longer processing time is required, this can be achieved by adding additives.

Curing time

Acrylic One is a water based product. Residual moisture must evaporate before obtaining the final result. The time needed for curing depends on external factors, such as the dimension of the object, the temperature and humidity. When the object has been laminated or cast in a mould, it can be removed from the mould as soon as it is strong enough to cope with the forces present. The product will achieve the optimum strength outside of the mould.

Gel coat

A gel coat is often used when working with Acrylic One. This gel coat can be applied as follows:

- Add the desired amount of Acrylic One Thin A to the mixture, by adding it in drops until the desired viscosity is achieved. Never exceed the maximum amounts.
- Add to the Acrylic One resin pigment in the desired colour, and/or other fillers like sand or metal powders if needed.
- Then Mix the Acrylic One resin in with the powder until a smooth mixture is obtained.
- Apply the gel coat layer in the mould of at least 1 mm layer thickness, with a brush or other tool.

Cleaning

Hands and skin can be washed using soap and water. Clean the equipment with water directly after use. We suggest that the brushes and equipment are cleaned in a bucket of water instead of in a wash basin, as the hardening process continues under water.

Technical data

- Mixing ratio: 2 parts powder
- 1 part acrylic resin
- Colour: creamy white (*1)
- Density (vap): 1.75 kg / dm3
- Density (dry): 1.66 kg / dm3
- Processing time: 20 minutes
- Demoulding time: approx. 1 hour
- Shelf life: 1 year (*2)
- Hardness: B5f Shore D
- Expansion during hardening: 0.1 – 0.5% (*3)
- Compression strength: approx. 30 MPa
- LOP (limit of proportionality): approx. 20 MPa
- H0K (modulus of rupture): approx. 60 MPa

(1) The value of Acrylic One can vary slightly with every production batch.
(2) Provided that Acrylic One is contained in a closed and frost free packaging.
(3) An additive is available to reduce expansion.
(4) Provided that Acrylic One is contained in a closed and frost free packaging.
(5) The colour of Acrylic One can vary slightly with every production batch.

Disclaimer

The technical data sheet of any Acrylic One product is available upon request and must be used and understood before use. However, the information in this user manual is considered accurate. It is however not possible to derive any rights from the information with regards to its accuracy. The user must be aware of this, and that the use of the product must be tested in a pilot. The user needs to ascertain the suitability of the product for the application for use within applicable. After in doubt, the user needs to carry out tests to ascertain the suitability of the product.
Laminating in a mould
When laminating in a mould, one can apply a gel coat first. As soon as the gel coat has set (after 30 minutes), the object can be laminated immediately (within one hour for best results) to ensure that an optimum adhesion between the gel coat and the laminate is achieved.

• Apply some Acrylic One in the mould and spread it equally over the surface.
• Then apply an Acrylic One triaxial fibre, which has been cut to size.
• Then apply Acrylic One again and work it into the triaxial fibre.
• Another layer of triaxial fibre can then be applied, the process is repeated this way.

Apply at least two layers of fibres, depending on the desired thickness and strength. Each layer of triaxial fibre results in a thickness of approximately 1 mm. Should the product thickness and strength fall short, a third or more layers of triaxial fibre should be applied depending on the desired thickness and strength. Then apply an Acrylic One triaxial fibre, which has been cut to size.

Spraying
Spraying of Acrylic One is easy. By spraying it is possible to apply a thin layer of Acrylic One. This technique is well suited for working with a silicone mould, but also for applying a thin layer of Acrylic One onto an EPS object. Spraying machines are for rent or sales at Acrylic One.

Acrylic One Thix A is an additive to thicken the product and to give it a gel texture. The thixotropy agent is applied to produce gel coats and vertical or suspended parts. By adding 2% in proportion to the total weight the maximum achievable thickness is achieved.

Acrylic One Thix B is an additive to thicken the product. While stirring Trax B into the Acrylic One mixture until the required thickness has been achieved. We recommend that you do not use this product if the object is expected to be exposed to water.

Acrylic One dilute reduces the viscosity of Acrylic One. It can be used to cast complicated products or to enable the use of more than one fibre. Acrylic One dilute can affect the processing time. Never use more than 5% Acrylic One dilute in proportion to the total weight.

Laminating around an object
Objects, for example made of modelling foam, can be coated in a mould with supporting moulds. The supporting moulds can also be made by using Acrylic One or a mixture of Acrylic One and ATP powder, to achieve a smooth finish.

When the Acrylic One is just about dry, the surface can be smoothed by using a wet sponge. After the object has fully cured, it can be sanded with sanding paper.