Resin for 3D printers: Buy resin for your UV LED, LCD, DLP and SLA-3D printers online here

Buy resin for 3D printers: This information is important if you want to buy resin for your UV LED, LCD, DLP and SLA-3D printers online. The resins for 3D printing are liquid material. They are unprocessed, liquid, often smelling chemically and belong to the synthetic resins. Moreover, the polymerization of the liquid resin is triggered by a (UV) light source in the 3D printer. Afterwards, the material hardens and changes its shape from liquid to solid, it polymerizes. When cured, this material belongs to the group of thermosetting plastics. The most frequently asked questions about resin in 3D printing are answered below. At 3D Prima you will find tested liquid resin for your Stereolithography, Digital Light Processing and Daylight 3D printer. Buy the optimal resin material here!

Resin - What is it?

Resin is a liquid material. In nature, resins are mainly found in trees and plants. Artificial resin occurs in 3D printing. It consists of liquid polymers and other additives. Resin represents a reactive intermediate stage in the production of thermosetting plastics. Moreover, resin has long been used in model and prototype construction. Furthermore, resin has been used in model making for a very long time. The first SLA-3D printer (stereolithography) used resin for rapid prototyping since the end of 1980.

Among other things, resin contains these components:

- Photoinitiators
- photopolymers
- Dyestuffs (optional)

Buy resin for your DLP-3D printer

Do you need material for your DLP-3D printer and want to buy resin? Here you can find resin for your DLP-3D printer. Machines with this technology 3D printing offer additive manufacturing of fine and highly detailed prototypes, models, tools and final parts.

These 3D printing processes process resin:

- SLA – Stereolithography
- DLP – Digital Light Processing
- UV LED
- LCD / Daylight

How does a DLP-3D printer process resin?

To solidify the liquid material, DLP-3D printers use a UV light projector. This system projects UV light with a wavelength of about 405 Nm onto the liquid material. The energy-containing UV light triggers the polymerisation of the liquid resin and it cures at the exposed points.
What is the advantage of processing resin on DLP-3D printers?

3D printing with resin offers some great advantages. For example, DLP 3D printing is very high resolution and precise. With DLP material you can generatively produce very complex bionic structures, fine details and resilient components.

You can use the DLP resin on these 3D printers, among other things

The DLP resin can be processed on many different 3D printers. Among other things, you can use it on these 3D printers:

- Flashforge Hunter
- MoonRay
- Zortrax Inkspire
- XYZPrinting Nobel Superfine

Buy SLA resin for your 3D printer

Do you Want to buy SLA resin for your 3D printer? With 3D Prima you get powerful yet affordable resin for your SLA-3D printer. Use SLA resin to create high-resolution objects with beautiful surfaces. Resin for SLA-3D printers polymerizes at a wavelength of around 380 nanometers (nm).

How does a SLA-3D printer work?

A SLA-3D printer works with photopolymerization technology. This processes and polymerizes the liquid material during the manufacturing process with a UV laser beam. The UV laser cures the resin selectively. It creates 3D objects by solidifying the liquid material in sheets and layers.

Why should I buy SLA resin?

3D prints from SLA resin allow some very advantageous applications of 3D printing. Compared to FDM/FFF-3D printing, SLA-3D printing is a high-resolution 3D printing technology, and components produced with it have optimized material properties. With SLA-3D printers you can also produce very large components, prototypes or tools accurately and with superior additive properties.

SLA-Resin is also suitable for these and many more SLA-3D printers:

- Formlabs Form 3D Printer
- XYZPrinting Nobel 1.0/A
- Sunulu SL
- Moneymaker

Buy resin for UV LED 3D printers at 3D Prima

Buy resin for your UV-LED-3D printer In the online shop of 3D Prima. Essentially polymerized (cures) UV LED resin in a wavelength range of around 405 nm. This is a similar wavelengths as DLP 3D printers use.
How does a UV LED 3D printer work?

3D printers using UV LED technology have a UV light source. This LED unit emits UV light, which is filtered by a conventional smartphone, tablet or computer monitor. At the translucent areas of the display, the liquid resin cures by the energy of the UV light, polymerizing it.

What do I need to consider when buying UV LED resin?

In principle, UV LED technology is similar to DLP 3D printing technology. Both 3D printing technologies can work with DLP resin. The only difference is the filtering method of the UV light. While DLP 3D printers work with specially optimized DLP projectors, UV LED 3D printers use conventional screens from smartphones, tablets, computer monitors or televisions – Wearing out the screens used.

For example these UV LED 3D printers work with resin:

- Wanhao Duplicator D7 Plus - DLP 3D printer
- Anycubic Photon DLP 3D printer
- Wanhao Duplicator D8
- Creality LD-001

Example of resin applications in 3D printing

3D printing with liquid materials (resin) is becoming increasingly popular. Resin can be used in 3D printing for these applications, among others:

- Hobby applications, handicrafts and consumer goods
- Creation of models for architecture, jewelry and design
- Precise models for precision mechanics and jewelers
- Prototypes, tools and end components
- Applications in industry and vehicle construction
- Technical and mechanical components
- Dental models for dental applications
FAQ – 3D printing with resin

What are the advantages of resin 3D printing (SLA, DLP and LCD) over fused layer 3D printing (FFF and FDM)?

Resin 3D printing has many advantages over FFF/FDM 3D printing:

- Resin 3D printers have a very high resolution – 3D prints have fine structures and details with a high surface quality.
- DLP and LCD 3D printers can work very fast if you intelligently fill the building platform with 3D models, because the entire layers are cured and not just the individual tracks are welded one after the other.
- Resin 3D prints consist of well-connected layers, not sheets. Due to the material properties different from thermoplastics, resin hardens and becomes very strong and durable in all directions.

What are the disadvantages of 3D printing with resin?

To get a better idea if 3D printing with resin is a good solution for you, here is an overview of the disadvantages of resin 3D printing:

1. Many resins smell strong before and during processing - the smell ranges from fir cone-like to strong chemical.
2. After 3D printing, the surface of the components is covered with resin residues and sticky.
3. Finished and already cured 3D prints cure - depending on the material - by UV radiation. This can cause the components to become brittle.
4. Depending on the type of material, resin is still more expensive than the thermoplastics used for filaments.

Use these tips & tricks to minimize the disadvantages of resin 3D printing and benefit from its major advantages:

1. 3D print with resin only in well ventilated rooms. We don’t recommend you live or work in a room where a resin 3D printer is currently working or where the filled resin tank is.
2. Only handle the resinous components with protective gloves. Clean the objects by placing them in a bath filled with IPA (isopropanol/isopropyl alcohol) for approx. 10 minutes and then let them dry. Then put them in a UV post-curing chamber or in sunlight for curing.
3. Paint or varnish your cured 3D prints to protect them from the weather and UV rays.
4. Resin material costs are constantly decreasing. Think about how you can save material with intelligent component and support structure design. Material costs are minimal, especially for small components.
Is resin a plastic?

No, resin is not necessarily a plastic. Resin is also found in nature. For example, pine trees contain resin and natural resins in their bark. These resins give pines, for example, their typical smell. Furthermore artificial resins, which are used in 3D printing partly smell after fir cones. In contrast to resins from nature, however, these are artificially produced and therefore belong to the group of plastics.

What is resin used for?

The artificially produced resins play a role in several applications. Among other things, resin is used to produce adhesives, lacquers, composite materials, electrical housings and thermosets. These materials are used in numerous industrial and everyday applications.

Where can I buy resin?

We recommend that you buy resin for your 3D printer in a specialized shop or store. This gives you the advantage that the material has already been successfully tested on popular SLA, DLP and UV LED 3D printers. The 3D Prima resins can be found in our online shop and on Amazon, Ebay and other marketplaces.

Is resin dangerous or harmful to health?

There is no general answer to this question. You can find out whether a resin is harmful to your health or dangerous from the manufacturer of the material. In general, we recommend that you handle resin with care and protect yourself from direct contact with gloves and safety glasses. To minimize the amount of resin vapors you inhale, you should use resin in an open or well-ventilated environment. This is to be on the safe side.

Is resin a liquid?

Before the resin polymerizes, it is liquid. After a polymerization – e.g. by exposure – the material changes its state and becomes solid, hard or flexible. A duroplast stands by polymerization of resin.

How safe is resin?

It all depends on which resin you use. In principle, we always recommend that you handle this material with care. Always use gloves and safety glasses when working with liquid resin. We recommend that you only use the resin in a place that is well ventilated so that you do not inhale any vapours. Keep your children away from resin!

How can I assemble two resin components?

Simply glue two components printed in 3D resin together with superglue. To do this, apply sufficient superglue to the surfaces of the objects and then press them together vigorously. Wait a moment and the components will stick firmly together.
Where is resin used besides 3D printing?

Resin is used in many applications. In addition to 3D printing, the use of resin is particularly popular in model making, hobbies and small series production. The resin is first cast into shape. Afterwards, the hardened components can then be made of resin, drilled, turned, sawed and ground. In this way you can get the most out of resin components.

What are the advantages of resin in 3D printing?

The use of resin in 3D printing is becoming increasingly popular. In recent years, numerous patents for 3D printing processes using resin have expired. As a result, more and more manufacturers are able to bring low-cost SLA, DLP, UV LED or LCD-3D printers onto the market. These 3D printing processes use all resin to produce impressively detailed parts with fine surfaces and details. Compared to FFF/FDM-3D printing, additive manufacturing with resin can produce extremely fine structures.

What do I need to consider when purchasing resin for my 3D printer?

When you buy resin, be sure to get the right resin for your 3D printer. Depending on whether you are using a SLA (Stereolithography), DLP (Digital Light Processing) or 3D printer with LCD technology, you will need to use the appropriate resin. When purchasing, look for the SLA, DLP, or LCD / Daylight label and the wavelength range in which the resin polymerizes (cures). If you use the wrong resin, the polymerization process will take a long time, be too fast or fail completely.

What are the material properties of resin?

There are resins on the market with a wide range of material properties. Different resins have different material properties. You can buy resins with the following properties: Solid, hard, flexible, fire resistant, resistant to acids and chemicals as well as biocompatible, for dental applications and many more.

Who benefits most from resin 3D printing?

Many users benefit from 3D printing with resin. Resin has been used in SLA-3D printing for prototyping since the late 1980s. While resin was very expensive for 3D printing in the past, the material is now much cheaper and affordable – even for hobbyists. 3D printing with resin gives you the opportunity to produce different component properties with very high details. 3D printers that process resin are now available for several hundred euros. Despite their low price, they deliver high resolution and good component quality. Because of the low price they are especially suitable for beginners.

Why should I start with resin 3D printing now?

You should start printing resin 3D now, as resin 3D printing has a promising future. The 3D printers that are able to process resin convince with a very high level of detail accuracy and outstanding material properties. Cheap DLP and UV LED and LCD 3D printers are available for hundreds of dollars.
Which manufacturers offer resin 3D printers?

There are now a large number of manufacturers offering resin 3D printers. Below are many well-known manufacturers of 3D printers that use resin:

- **3D Systems** - The inventors of stereolithography (SLA) and thus of resin 3D printing, market leader in the area of industrial SLA 3D printers
- **Anycubic** - Known for affordable and affordable consumer UV LED 3D printers
- **Creality** - After the great success of its FFF-3D printers, Creality enters the desktop resin 3D printer market with the LD-001
- **Formlabs** - One of the First Manufacturers of SLA-3D Printers for the desktop
- **Flashforge** - With the Hunter, Flashforge has one of the leading desktop DLP 3D printers
- **Wanhao** - Low cost entry-level UV LED 3D desktop printers
- **XYZPrinting** - Manufacturer of cheap desktop SLA and DLP 3D printers
- **Zortrax** - The renowned manufacturer Zortrax has recognized the possibilities of resin 3D printing and with the Inkspire delivers its first device in the usual Zortrax quality.

There are also a number of companies offering SLA, DLP, UV LED and LCD 3D printers.

Buy good-value resin for your UV LED, LCD, DLP and SLA-3D printers at a good price here.