



Material



Key

- PUR foam
- Polypropylene (PP) reinforced with fiber glass
- Polyamide PA6 reinforced with fiber glass
- Polyamide PA6 reinforced with fiber glass and steel inserts
- Polyamide PA6 with steel inserts
- SEBS (Styrene-Ethylene-Butylene-Styrene)
- Aluminium
- Steel parts - coated

Materials

The way in which Simplex 3D is constructed allows the chair to be dismantled at the end of its working life in order to recycle most of the parts. A detailed list of the materials used follows:

Polyamide (PA6 reinforced with 10–50% fiber glass)

Properties: The flash point of the material lies at 400 °C. The ignition temperature lies at 450 °C. Thermal decomposition occurs when the part is subjected to a temperature of 350 °C.

Recycling: Yes – the parts can be recycled.

System parts: 5-prong base, seat shell, back shell, seat height lever, locking lever

Polyamide (PA6/PA6.6)

Properties: The flash point of the material lies at 400 °C. The ignition temperature lies at 450 °C. Thermal decomposition occurs when the part is subjected to a temperature of 350 °C.

Recycling: Yes – the parts can be recycled.

System parts: Castors, glides

Steel parts

Properties: The parts are of very high strength with regard to breakage, traction, torsion and bending. The level of strength is higher or lower, depending on the quality grade. The parts are corrosionresistant after electroplating. Thermal decomposition occurs when the part is subjected to a temperature of 1100 °C.

Recycling: Yes – the parts can be recycled.

System parts: Bolts, springs, washers, screws, steel lever

Steel parts – coated (resin)

Properties: The parts are of very high strength with regard to breakage, traction, torsion and bending. The level of strength is higher or lower, depending on the quality grade. The parts are corrosionresistant after electroplating. Epoxy resin powder is used to coat the parts. Thermal decomposition occurs when the part is subjected to a temperature of 1100 °C.

Recycling: Yes – the parts can be recycled.

System parts: Screws, height column

Aluminium (pressure die casting) coated and polished

Properties: The alloy corresponds to the DIN 1725standard. Aluminium die casting has a high level of strength, is easily shaped and offers several finishing methods. There are different polishing levels as well as different epoxy resin powder coatings in an extensive range of colours.

Recycling: Yes – the parts can be recycled.

System parts: Five-prong base, support, joint

PUR foam

Properties: All PUR foam parts (polyurethane) in versions made of cold cured foam or integral foam are produced without any CFCs and are created by means of a polyaddition reaction of isocyanate and polyether polyol. This results in cellular material with elastic properties. Thermal decomposition takes place at a temperature of over 180 °C, and the ignition temperature is between 315 °C and 370 °C.

Recycling: Yes, the parts can be sent for either materials or thermal recycling.

System parts: Backrest foam, seat foam, Cellasto components

Polyoxymethylene (POM)

Properties: The flash point of the material lies at 370 °C. The ignition temperature lies at 400 °C. Thermal decomposition occurs when the part is subjected to a temperature of 220 °C.

Recycling: Yes – the parts can be recycled.

System parts: Bearing bush

Styrene-Ethylene-Butylene-Styrene (SEBS)

Properties: The flash point is not applicable. The ignition temperature lies at 330 °C. Thermal decomposition occurs when the part is subjected to a temperature of 300–320 °C.

Recycling: Yes – the parts can be recycled.

System parts: Bellows (cover)

Polypropylene (PP reinforced with 20% fiber glass)

Properties: The flash point is not applicable. The ignition temperature lies at 330 °C. Thermal decomposition occurs when the part is subjected to a temperature of 300–320 °C.

Recycling: Yes – the parts can be recycled.

System parts: Retaining ring

Cover materials

Properties: Detailed information on the composition of materials can be found on the respective fabric and leather cards.

Recycling: Yes – some of the unblended cover fabrics made from natural fibers can be returned to the suppliers. There, the covers are shredded and reused to produce new fabric. Cover fabrics made from synthetic materials can be recycled. The methods used to tan and dye the leather covers allow them to be composted without problem.

System parts: Woven polyester

Additional information – connections

Simplex 3D is made from a large number of single parts. The parts are all mechanically joined (= can be dismantled, detached). These plug-in and screw connections allow the different types of material to be separated when the chair is dismantled.

Additional information – material identification

The larger parts made of Polypropylene (PP), Polyamide (PA), Polyoxymethylene (POM) and Acrylonitrile-Butadiene-Styrene (ABS) are marked with the respective material identification code for recycling.

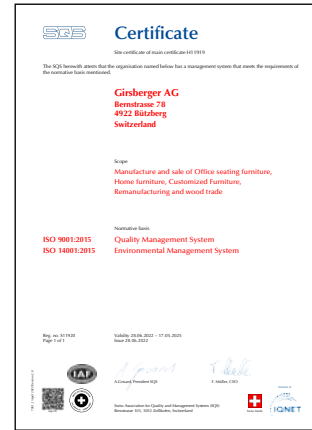
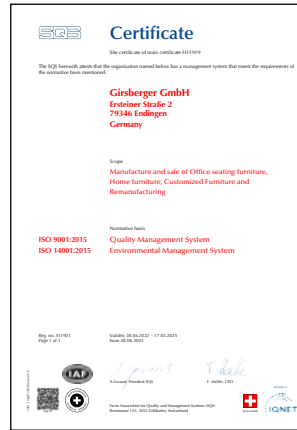
Certificates

Quality

Girsberger has extremely high quality assurance standards and is certified according to DIN EN ISO 9001.

Environment

Since 2007, Girsberger has operated an environmental management system certified to the EN ISO 14001 standard, which obliges us to continually improve our environmental performance. All materials used for the Simplex 3D model series can be sorted into material types and recycled.



Functionality and safety

The design of the products in the Simplex 3D model series conforms with the following standards:

EN 1335

The safety of the Simplex 3D product series has been tested and confirmed by TÜV LGA with the issue of the GS („safety approved“) certificate.

Moreover, TÜV LGA has issued its „tested for hazardous substances“ certificate for the Simplex 3D (without stool version).



Design

In 2019, Girsberger won the red dot award for the design of the Simplex 3D chair.



reddot award 2019
winner

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