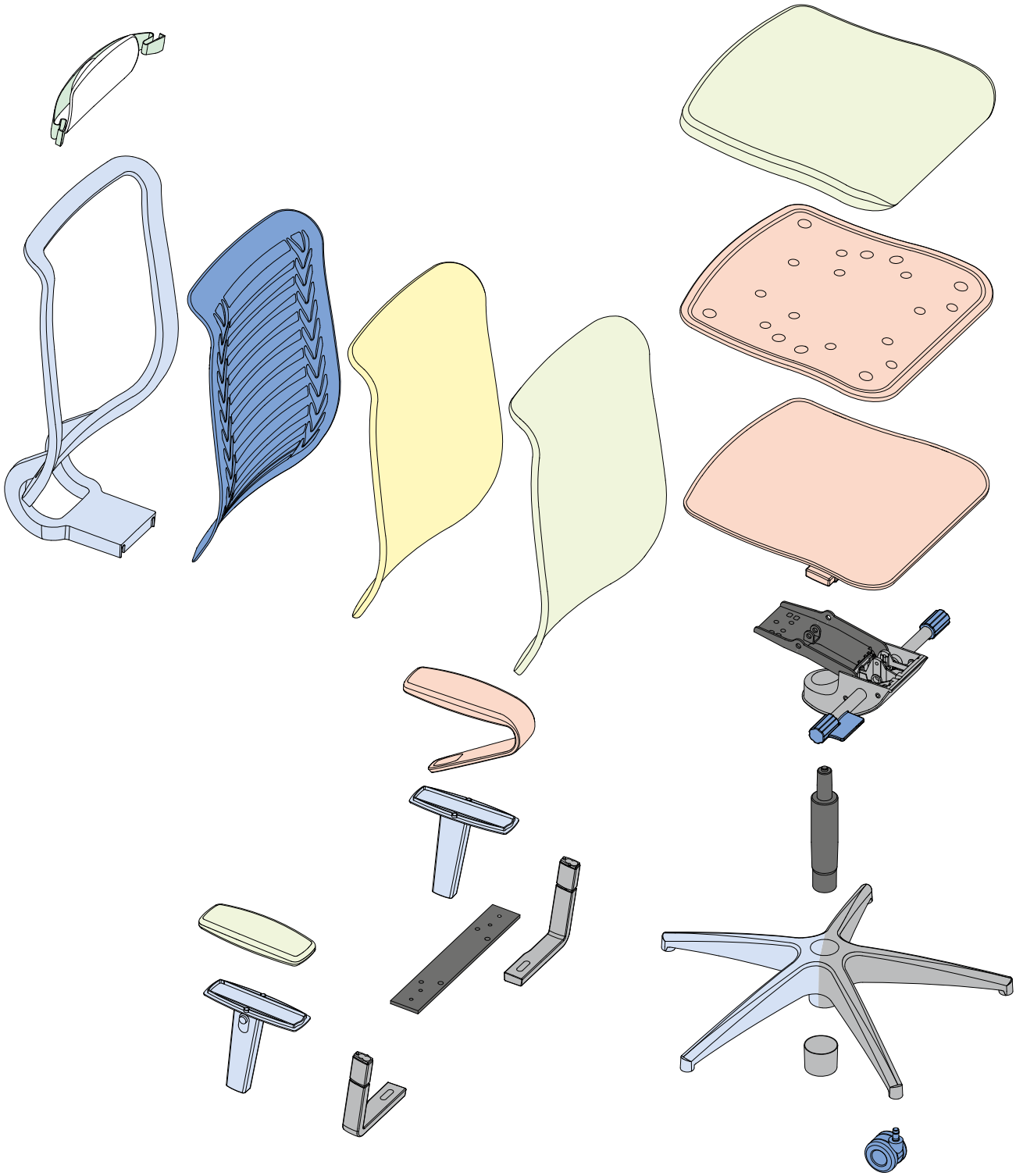
Material



Key

- Polyester
- PUR foam
- Polyoxymethylene (POM)
- Polypropylene (PP)
- Polyamide PA6
- Polyamide PA6 reinforced with 10–30% fiber glass
- Aluminium
- Steel parts – coated

The way in which Reflex 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 – 30% 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, backrest frame, headrest, armrest, rotary handle, cover for seat shell guide, release lever for seat shell, mechanism components

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: Twin castors, pad, operating lever mechanism, slated membrane

Polypropylene (PP)

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: Seat shell, shell for seat upholstery, armrest cap, cap for ring-shaped armrest

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: Lumbar support carrier, lumbar support spindle, lumbar support hand wheel, eccentric mechanism

Acrylonitrile-Butadiene-Styrene (ABS)

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: Cone cover, shell for headrest padding

Polyester (PES)

Properties: Polyester fibers are flame-retardant. The mesh fibers used for Reflex have been tested according to the BS 5852 Burning Behaviour and EN DIN 1021 standards, both of which are part of the EN12182 standard, and Burning Test / Flammability according to FMVSS 302 / DIN 75200 and NF P 92 503 class M2. They are well tolerated by skin.

Recycling: Yes – the parts can be recycled.

System parts: Mesh

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 corrosion-resistant 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: Screws, axles, nuts, washers, springs

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 corrosion-resistant 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: Pneumatic spring, back support mechanism, armrest crossbeam, coat hanger

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: Seat foam, backrest padding, armrest cap

Aluminium (pressure die casting) coated and polished

Properties: The alloy corresponds to the DIN 1725 standard. 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: Casing for mechanism, 5-prong base, armrest support

Adhesives

Properties: The adhesives for upholstery consist of 18 – 25% synthetic resins and 75 – 82% solvent mixture. The adhesives for upholstery are free of toluol. If used as designated, thermal decomposition does not occur. No hazardous decomposition products are generated and there are no hazardous reactions.

Recycling: Yes – when set, the adhesives (together with the materials they bond) can be converted into filling material.

System parts: Used for upholstery

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: Cloth and leather covers, woven polyester

Additional information – connections

Reflex is made from a large number of single parts.

The parts are all mechanically joined (= can be dismounted, detached). These plug-in and screw connections allow the different types of material to be separated when the chair is dismantled.

Exception: The PU soft foam padding of the armrests is foamed together with its shell.

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

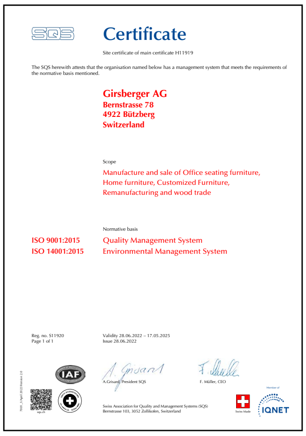
Since 2007, Girsberger has operated an environmental management system certified to the EN ISO 14001 standard, which obliges us to continually improve our environmental performance. All materials used for the Reflex model series can be sorted into material types and recycled.


Certificate

Girsberger GmbH
Ersteiner Straße 2
79346 Endingen
Germany

Manufacture and sale of Office seating furniture, Home furniture, Customized Furniture and Remanufacturing

ISO 9001:2015 Quality Management System
ISO 14001:2015 Environmental Management System


Certificate

Girsberger AG
Bernstrasse 78
4922 Bützberg
Switzerland

Manufacture and sale of Office seating furniture, Home furniture, Customized Furniture, Remanufacturing and wood trade

ISO 9001:2015 Quality Management System
ISO 14001:2015 Environmental Management System

Functionality and safety

The design of the products in the Reflex model series conforms with the following standards:

EN 1335
BS 5459
NPR 1813
ANSI/BIFMA X5.1

The safety of the Reflex 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 «ergonomics approved» and LGA «tested for hazardous substances» certificates for the Reflex.

The «Quality Office» certificate from the BSO Verband (German association of office, seating and commercial furniture companies) and the Verwaltungs-Berufsgenossenschaft (German provider of Statutory accident insurance) attests to the above-average quality of the Reflex model series.


Zertifikat Certificate


LGA
Zertifikat
Certificate

Girsberger GmbH
Sitzmöbelfabrik
79346 Endingen

Büro-Arbeitsstühle
Modellreihe „Reflex"


Zertifikat Certificate

Design

In 2007, Girsberger won the red dot award for the design of the Reflex chair.

reddot design award
winner 2007

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girsberger