



Henge - HNG102

Design by Q Design

Henge is a modern interpretation of the classic club and tuxedo lounge chair, a hybrid of organic yet tailored shapes, with wedge shape seating that allows endless configurations for any space.

The unique two-tone upholstery detail adds a sophisticated design element, while the separate seat cushion can be upholstered in complementary or contrasting textiles, enhancing the longevity of the design.

Product Summary

Scope of Assesment:

From extraction of raw materials through to production of the final Office Furniture unit (cradle to gate). See page 2 for more details.

Data Used:

Primary data was used wherever possible including for energy use during the core module.

All secondary data was obtained from the Ecolnvent database used in conjunction with SimaPro 7.3.2, using US, European and Global data where relevant.

Functional Unit:

A Table solution designed and manufactured to last 10 years.

Regional Market:

The primary market for our Office Furniture products is USA. The scope of this declaration reflects that.

Material Declaration

Material	Amount (kg)	Total (%)
Fabric	2.00	4.77
PU foam	7.00	16.71
MDF	4.00	9.55
Plywood	23.00	54.89
Steel	5.90	14.08

Environmental Summary

Global Warming Potential (Kg Co2 Eq):	130.45
Recycled Content (% By Weight):	14.00
Total Energy Consumption (Mj):	3991.44
Recyclability (% By Weight):	99.00
Date of Production:	April 2016

Environmental Product Analysis

This Environmental Product Analysis has been created in accordance with, and following the principles of ISO14025 and ISO14044. All the Life Cycle Analysis data has been compiled, processed and verified by Oakdene Hollins Ltd.

Compilation and processing of LCA data performed by Dr. Dan Skinner (Oakdene Hollins Ltd.)

Verification of LCA and environmental data performed by Dr. Adrian Chapman (Oakdene Hollins Ltd.)

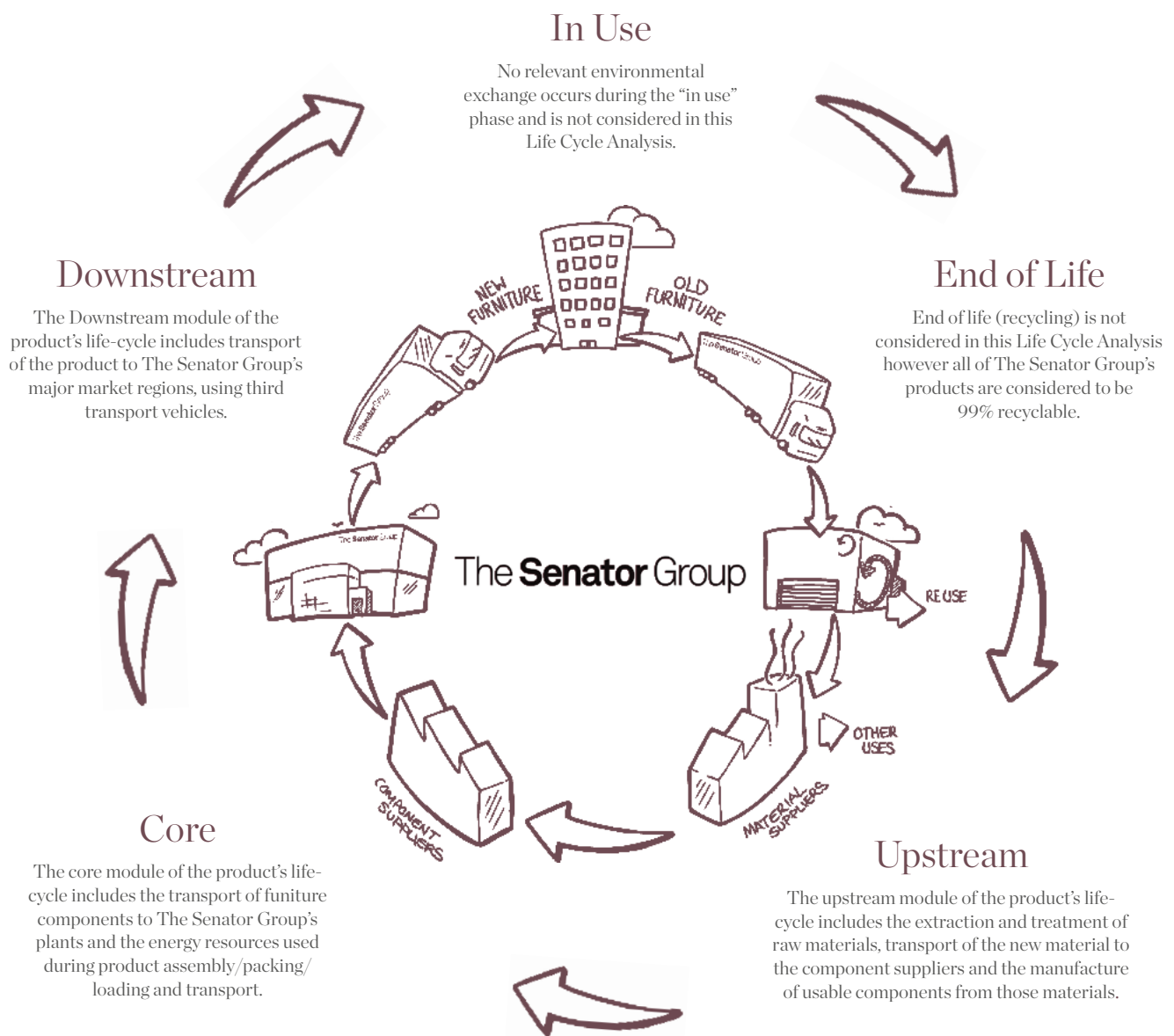
System Boundaries

The Senator Group has for many years acknowledged that the key word upon which to focus our attention is Sustainability rather than Recyclability in pure isolation.

Our business takes a truly holistic approach to the design, manufacture, supply and reclamation of our products. We see this as a cyclical process. From design to manufacture, use and reclamation we aspire to minimise all environmental impacts of The Senator Group's products and processes.

We can harvest the resources back from the retired products then remanufacture or reintroduce the materials into our component manufacturers supply chain.

We believe in taking responsibility for our own actions ourselves, wherever possible, rather than relying on third parties, or abdicating our responsibilities by offsetting our carbon footprint internally in the UK. The process of Sustainability is a cyclical one we understand this and we actively pursue this in everything that we do.



System Boundaries

Resource (Kg)	Upstream	Core	Downstream	Total
From the Air	100.71	0.17	0.04	100.92
From the Ground	114.31	7.87	18.24	140.42
From The Water	0.00	0.78	0.00	0.78

Energy Consumption

Resource (MJ)	Upstream	Core	Downstream	Total
Biomass	1122.86	1.63	0.40	1124.89
Hydro	52.76	3.83	2.26	58.85
Solar	0.08	0.01	0.00	0.09
Wind	5.53	0.23	0.10	5.86
Non-Renewable Energy (MJ)	2472.98	115.44	213.33	2801.75
Total	3654.21	121.14	216.09	3991.44

Environmental Impact Potential

Resource	Upstream	Core	Downstream	Total
Global Warming (Kg CO2 Equivalents)	110.97	6.95	12.53	130.45
Acidification (Kg SO2 Equivalents)	0.60	0.07	0.06	0.73
Eutrophication (Kg PO43 Equivalents)	0.03	0.00	0.00	0.03
Ozone Depletion (Kg CFC 11 Equivalents)	0.00	0.00	0.00	0.00
Photochemical Smog (Kg C2H4 Equivalents)	0.07	0.00	0.01	0.08

Toxic Emissions

Resource (Kg)	Upstream	Core	Downstream	Total
From the Air	152.15	543.41	1225.88	1921.44
From the Ground	0.11	0.05	0.14	0.30
From The Water	19.05	8.84	18.21	46.10

Recycled Content

Material	Recycled Content of Material (% by weight)	Recycled Content In Product (% by weight)
Material	Amount	Percent of Total
Fabric	50.00	2.50
MDF	45.00	4.50
Steel	50.00	7.00
Total		14.00

Certificates

Description	Accreditation	First Certified	
Quality Assurance	ISO 9001	Certified 1991	
Environmental Management	ISO 14001	Certified 2001	
Chain of Custody	FSC®	Certified 2003	
Sustainability	FISP	Certified 2006	
Energy Management	ISO 50001	Certified 2013	
Health & Safety Standard	BS OHSAS 18001	Certified 2015	

Energy Management:

External proof that The Senator Group has implemented a robust system to monitor all energy usage and have a process to continually minimise energy usage.

We believe The Senator Group was the first company in the furniture industry in the UK to achieve this standard.

Chain of Custody

Independent certification to prove The Senator Group in the UK only purchases MFC/MDF/Chipboard from manufacturers who can prove they purchase their raw wood from sustainable sources.

FISP (Furniture Industry Sustainability Programme)

Awarded by FIRA in the UK, this sustainability certificate is designed to monitor all sustainability aspects of a company's facilities and operations. The Senator Group achieved one of the first sustainability certifications within the UK furniture industry – a public declaration of our commitment to improving our performance in every possible way.

ISO 14001 Environmental Management

This aims to reduce and eliminate and all negative impacts Senator's production units have on the environment and we can demonstrate our performance since 2001.

In 2013 The Senator Group was awarded the 2013 Worshipful Company of Furniture Makers Sustainability Award .

The Senator Group

The Senator Group is committed to continually improving the sustainability of all environmental aspects within our business.

To meet both international standards and our own environmental targets we apply the three R's principle –

Reduce, Reuse and Recycle.

Whilst recycling is the element which receives the most exposure it is actually the last option available and should never be the prime target in anyone's battle to reduce waste.

It is our duty as individuals and as a company to initially attempt to Reduce usage. Then we should look to Reuse wherever possible and finally, only after these two processes have been exhausted, should we consider Recycling.

Assessment Considerations

The following necessary assumptions and considerations were made during the course of the Life-Cycle Analysis:

- Manufacture of the furniture components was assumed to take place in the same factory in which the raw materials were processed, due to a lack of case-specific data.
- The transport of all materials, components and finished products was assumed to be via 53ft trailer.
- All LCA data was modelled using the IMPACT 2002+ (v2.06) method.