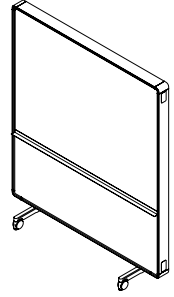


# SENATOR

## Adapt Wall - AW7865FD

This constant reaction to the change of an individual's daily working routine was the catalyst for Adapt. Born out of the idea to create mobile partitions — to enable more agile, fluid, and flexible spaces — empowering every user to create spaces that work for them at that moment.



## PRODUCT SUMMARY

### Scope of Assessment:

From extraction of raw materials through to production of the final desking 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 EcolInvent database, used in conjunction with SimaPro 7.3.2, using European data only.

### Functional Unit:

A desking solution designed and manufactured to last for 15 years.

### Regional Market:

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

## ENVIRONMENTAL

### Material Declaration Certificates

Material:	Amount (kg)	Total (%)
Fabric	1.62	2.33
Nylon (30% glass)	0.94	1.35
TFL	19.05	27.40
Plywood	22.28	32.04
Aluminum Castings	6.58	9.46
Aluminum Extrusion	16.98	24.42
Stainless Steel (304)	0.29	0.42
Steel	0.31	0.45
Zinc Castings	0.53	0.76
High Pressure	0.95	1.37

### Environmental Summary

Global Warming Potential (Kg Co2 Eq):	98.03
Recycled Content (% By Weight):	46.15
Total Energy Consumption (Mj):	3291.87
Recyclability (% By Weight):	99.00

**Date of Production: 4th October 2021**

## 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.

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# SUSTAIN

---

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 minimize all environmental impacts of The Senator Group's products and processes.

We 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. The process of Sustainability is a cyclical one we understand this and we actively pursue this in everything that we do.

---

## In Use:

No relevant environmental exchange occurs during the "in use" phase and is not considered in this Life Cycle Analysis.

## End of Life:

End of life (recycling) is not considered in this Life Cycle Analysis however all of The Senator Group's products are considered to be 99% recyclable.

## Group:

The Senator Group offers a full recycle service for all it's customers and clients, to close the recycling loop.

## Upstream:

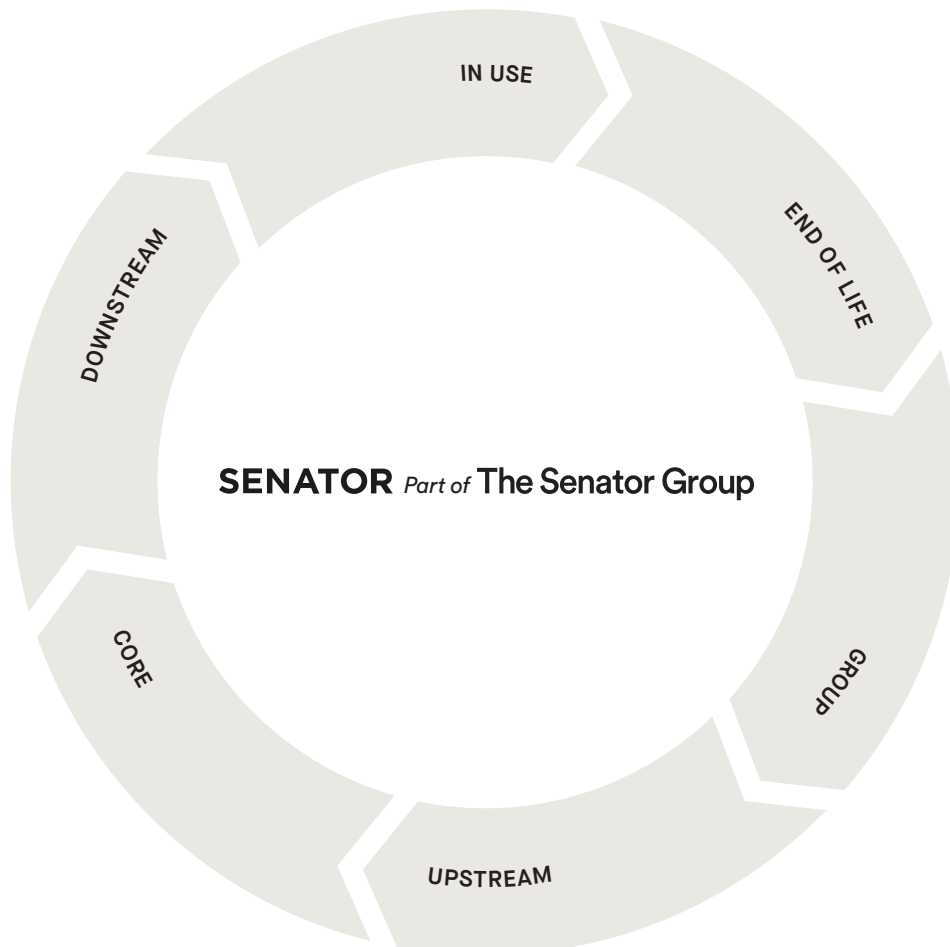
The upstream module of the product's life-cycle includes the extraction and treatment of raw materials, transport of the new material to the component suppliers and the manufacture of usable components from those materials.

## Core:

The core module of the product's life-cycle includes the transport of furniture components to The Senator Group's plants and the energy resources used during product assembly/packing/loading and transport.

## Downstream:

The Downstream module of the product's life-cycle includes transport of the product to The Senator Group's major market regions, using third transport vehicles.



## SYSTEM BOUNDARIES

Resource (Kg)	Upstream	Core	Downstream	Total
From the Air	119.01	1.34	0.01	120.36
From the Ground	72.27	23.07	3.25	98.59
From the Water	0.00	0.00	0.00	0.00

## ENERGY CONSUMPTION

Resource (Kg)	Upstream	Core	Downstream	Total
Biomass	1310.62	14.77	0.07	1325.46
Hydro	64.80	4.88	0.40	70.08
Solar	0.08	0.00	0.00	0.08
Wind	5.51	1.43	0.02	6.96
Non-Renewable Energy (MJ)	1568.06	283.21	38.02	1889.29
<b>Total</b>	<b>2949.07</b>	<b>304.29</b>	<b>38.51</b>	<b>3291.87</b>

## ENVIRONMENTAL IMPACT POTENTIAL

Resource (Kg)	Upstream	Core	Downstream	Total
Global Warming (Kg CO2 Equivalents)	79.89	15.91	2.23	98.03
Acidification (Kg SO2 Equivalents)	0.48	0.06	0.01	0.55
Eutrophication (Kg PO43 Equivalents)	0.06	0.00	0.00	0.06
Ozone Depletion (Kg CFC 11 Equivalents)	0.00	0.00	0.00	0.00
Photochemical Smog (Kg C2H4 Equivalents)	0.03	0.00	0.00	0.03

## TOXIC EMISSIONS

Resource (Kg)	Upstream	Core	Downstream	Total
To the Air	118.84	584.22	218.50	921.57
To the Ground	0.09	0.07	0.03	0.18
To the Water	13.16	9.85	3.25	26.25

## ENERGY CONSUMPTION

Material	Recycled Content of Material (% by weight)	Recycled Content In Product (% by weight)
Fabric	50.00	1.00
TFL	45.00	12.15
Aluminum Castings	100.00	9.00
Aluminum Extrusion	100.00	24.00
<b>Total</b>		<b>46.15</b>

## CERTIFICATES

Description	Certification	First Certified
Quality Assurance	ISO 9001	Certified 1991
Environmental Management	ISO 14001	Certified 2001
Chain of Custody	FSC®	Certified 2003
Sustainability	FISP	Certified 2006
Occupational Health & Safety Management	ISO 45001	Certified 2021



All UK manufacturing Sites are certified to ISO standards, 9001, 14001 and 45001. In addition to this our Desking, Seating Division, Specialist Product and Teal sites are certified to Chain of Custody. We can provide FSC® certified products upon request.

### Furniture Industry Sustainability Program:

Awarded by FIRA, 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 furniture industry – a public declaration of our commitment to improving our performance in every possible way.

### Chain of Custody:

Independent certification to prove Senator only purchases TFL/MDF/Chipboard from manufacturers who can prove they purchase their raw wood from sustainable sources.

### Business Principles:

The business works to the principles and through collaboration with our internal and external experts, we ensure that we have a robust, efficient and auditable system that ensure continuous improvement.

### Environmental Management:

From extraction of raw materials through to production of the final Office Furniture unit (cradle to gate).

See page 2 for more details.

## THE THREE R'S

Senator 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**.

– Reduce  
– Reuse  
– Recycle

## 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.

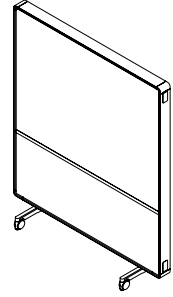
The transport of all materials, components and finished products was assumed to be via 16-32t Euro 6 lorries.

All LCA data was modeled using the IMPACT 2002+ (v2.06) method.

# SENATOR

## Adapt Wall - AW7865FF

This constant reaction to the change of an individual's daily working routine was the catalyst for Adapt. Born out of the idea to create mobile partitions — to enable more agile, fluid, and flexible spaces — empowering every user to create spaces that work for them at that moment.



## PRODUCT SUMMARY

### Scope of Assessment:

From extraction of raw materials through to production of the final desking 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 EcolInvent database, used in conjunction with SimaPro 7.3.2, using European data only.

### Functional Unit:

A desking solution designed and manufactured to last for 15 years.

### Regional Market:

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

## ENVIRONMENTAL

### Material Declaration Certificates

Material:	Amount (kg)	Total (%)
Fabric	13.50	17.38
Nylon (30% glass)	0.34	0.44
Plywood	39.44	50.77
Aluminum Castings	6.58	8.47
Aluminum Extrusion	16.70	21.50
Stainless Steel (304)	0.29	0.37
Steel	0.31	0.40
Zinc Castings	0.53	0.68

### Environmental Summary

Global Warming Potential (Kg Co2 Eq):	162.51
Recycled Content (% By Weight):	37.50
Total Energy Consumption (Mj):	5548.12
Recyclability (% By Weight):	99.00

**Date of Production: 4th October 2021**

## ENVIRONMENTAL PRODUCT ANALYSIS

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# SUSTAIN

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---

## In Use:

No relevant environmental exchange occurs during the "in use" phase and is not considered in this Life Cycle Analysis.

## End of Life:

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## Group:

The Senator Group offers a full recycle service for all it's customers and clients, to close the recycling loop.

## Upstream:

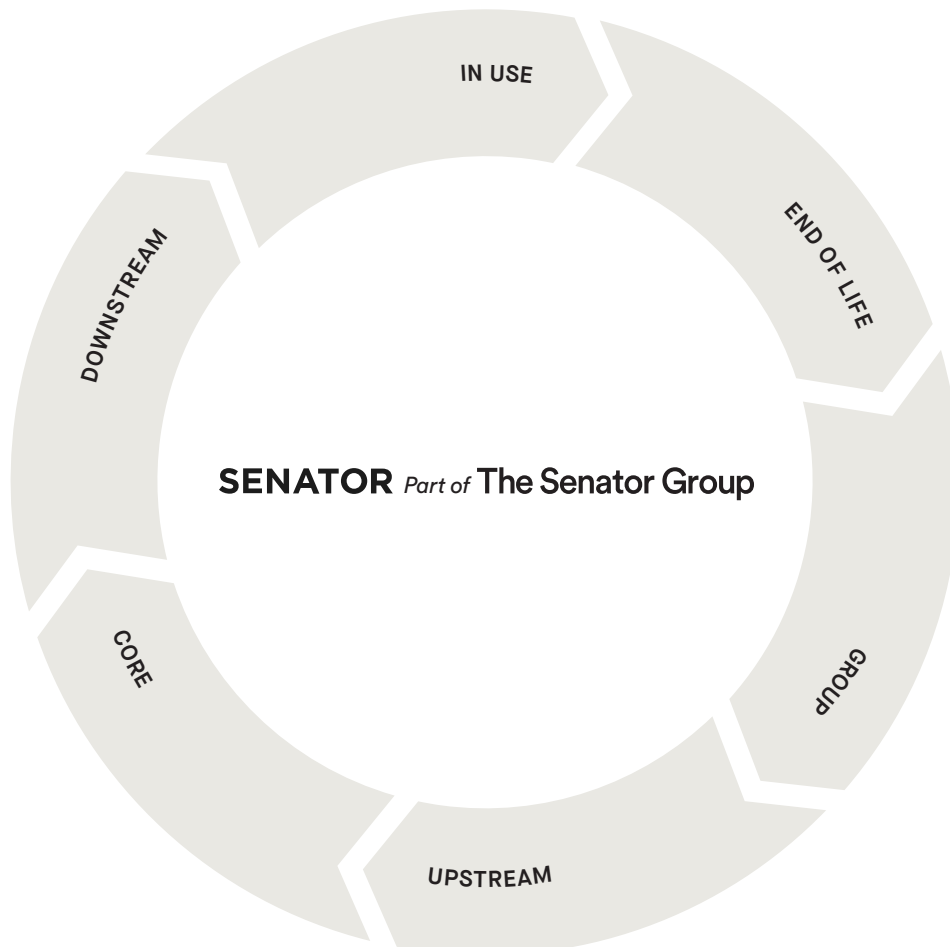
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## Downstream:

The Downstream module of the product's life-cycle includes transport of the product to The Senator Group's major market regions, using third transport vehicles.



## SYSTEM BOUNDARIES

Resource (Kg)	Upstream	Core	Downstream	Total
From the Air	214.61	1.34	0.01	215.96
From the Ground	156.28	24.02	3.63	193.93
From the Water	0.00	0.00	0.00	0.00

## ENERGY CONSUMPTION

Resource (Kg)	Upstream	Core	Downstream	Total
Biomass	2357.31	14.79	0.08	2372.18
Hydro	104.86	4.99	0.45	110.30
Solar	0.15	0.00	0.00	0.15
Wind	10.76	1.43	0.02	12.21
Non-Renewable Energy (MJ)	2716.44	294.36	42.48	3053.28
<b>Total</b>	<b>5189.52</b>	<b>315.57</b>	<b>43.03</b>	<b>5548.12</b>

## ENVIRONMENTAL IMPACT POTENTIAL

Resource (Kg)	Upstream	Core	Downstream	Total
Global Warming (Kg CO2 Equivalents)	143.45	16.56	2.50	162.51
Acidification (Kg SO2 Equivalents)	1.12	0.07	0.01	1.20
Eutrophication (Kg PO43 Equivalents)	0.09	0.00	0.00	0.09
Ozone Depletion (Kg CFC 11 Equivalents)	0.00	0.00	0.00	0.00
Photochemical Smog (Kg C2H4 Equivalents)	0.06	0.00	0.00	0.06

## TOXIC EMISSIONS

Resource (Kg)	Upstream	Core	Downstream	Total
To the Air	247.56	648.29	244.13	1139.99
To the Ground	0.16	0.07	0.03	0.27
To the Water	22.18	10.80	3.63	36.61

## ENERGY CONSUMPTION

Material	Recycled Content of Material (% by weight)	Recycled Content In Product (% by weight)
Fabric	50.00	8.50
Aluminum Castings	100.00	8.00
Aluminum Extrusion	100.00	21.00
<b>Total</b>		<b>37.50</b>

## CERTIFICATES

Description	Certification	First Certified
Quality Assurance	ISO 9001	Certified 1991
Environmental Management	ISO 14001	Certified 2001
Chain of Custody	FSC®	Certified 2003
Sustainability	FISP	Certified 2006
Occupational Health & Safety Management	ISO 45001	Certified 2021



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### Chain of Custody:

Independent certification to prove Senator only purchases TFL/MDF/Chipboard from manufacturers who can prove they purchase their raw wood from sustainable sources.

### Business Principles:

The business works to the principles and through collaboration with our internal and external experts, we ensure that we have a robust, efficient and auditable system that ensure continuous improvement.

### Environmental Management:

From extraction of raw materials through to production of the final Office Furniture unit (cradle to gate).

See page 2 for more details.

## THE THREE R'S

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– Reduce  
– Reuse  
– Recycle

## 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 16-32t Euro 6 lorries.

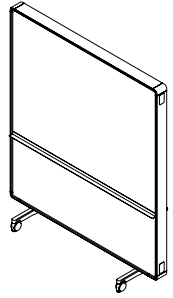
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# SENATOR

## Adapt Wall - AW7865FfD

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## PRODUCT SUMMARY

### Scope of Assessment:

From extraction of raw materials through to production of the final desking 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 EcolInvent database, used in conjunction with SimaPro 7.3.2, using European data only.

### Functional Unit:

A desking solution designed and manufactured to last for 15 years.

### Regional Market:

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

## ENVIRONMENTAL

### Material Declaration Certificates

Material:	Amount (kg)	Total (%)
Fabric	4.50	5.40
Nylon (30% glass)	0.94	1.13
TFL	36.20	43.41
Plywood	14.88	17.84
Aluminum Castings	6.58	7.89
Aluminum Extrusion	17.16	20.70
Stainless Steel (304)	0.29	0.35
Steel	0.31	0.37
Zinc Castings	0.53	0.63
High Pressure	1.91	2.28

### Environmental Summary

Global Warming Potential (Kg Co2 Eq):	123.28
Recycled Content (% By Weight):	50.85
Total Energy Consumption (Mj):	4277.21
Recyclability (% By Weight):	99.00

**Date of Production: 4th October 2021**

## ENVIRONMENTAL PRODUCT ANALYSIS

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# SUSTAIN

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## In Use:

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## End of Life:

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## Group:

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## Upstream:

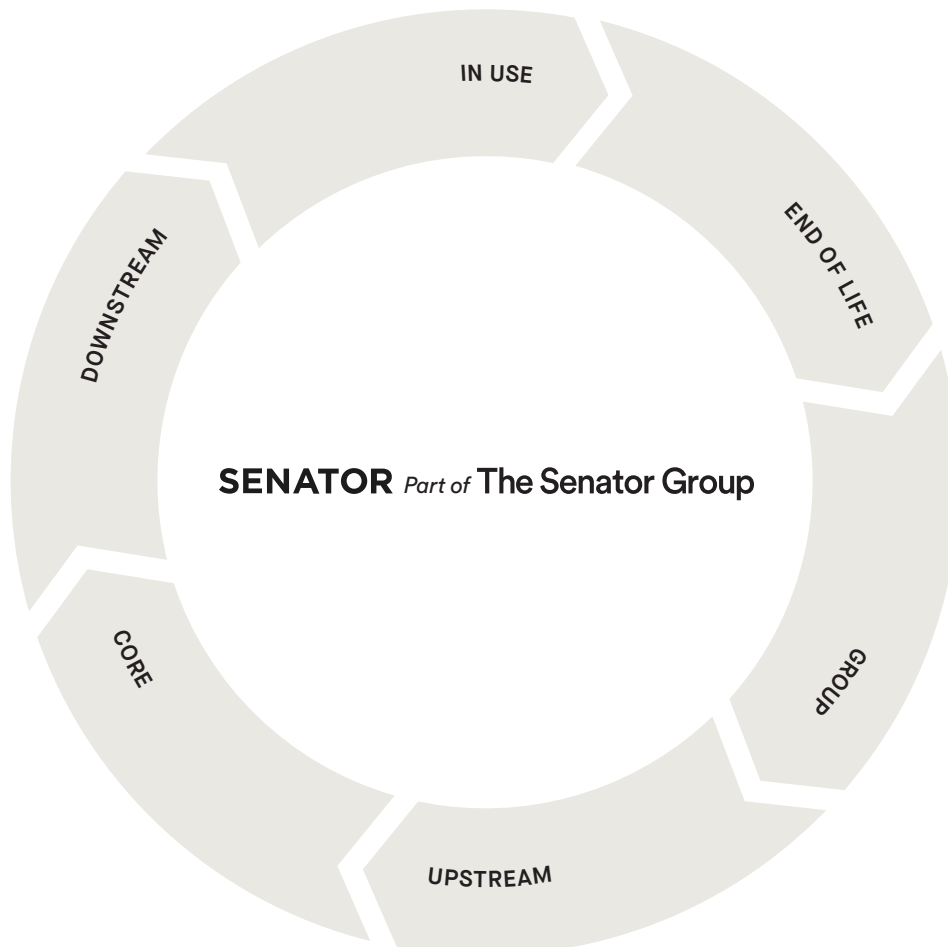
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## Downstream:

The Downstream module of the product's life-cycle includes transport of the product to The Senator Group's major market regions, using third transport vehicles.



## SYSTEM BOUNDARIES

Resource (Kg)	Upstream	Core	Downstream	Total
From the Air	161.42	1.34	0.01	162.77
From the Ground	86.99	24.69	3.90	115.58
From the Water	0.00	0.00	0.00	0.00

## ENERGY CONSUMPTION

Resource (Kg)	Upstream	Core	Downstream	Total
Biomass	1782.17	14.80	0.09	1797.06
Hydro	78.01	5.08	0.48	83.57
Solar	0.10	0.00	0.00	0.10
Wind	7.32	1.44	0.02	8.78
Non-Renewable Energy (MJ)	2039.95	302.15	45.60	2387.70
<b>Total</b>	<b>3907.55</b>	<b>323.47</b>	<b>46.19</b>	<b>4277.21</b>

## ENVIRONMENTAL IMPACT POTENTIAL

Resource (Kg)	Upstream	Core	Downstream	Total
Global Warming (Kg CO2 Equivalents)	103.58	17.02	2.68	123.28
Acidification (Kg SO2 Equivalents)	0.65	0.07	0.01	0.73
Eutrophication (Kg PO43 Equivalents)	0.07	0.00	0.00	0.07
Ozone Depletion (Kg CFC 11 Equivalents)	0.00	0.00	0.00	0.00
Photochemical Smog (Kg C2H4 Equivalents)	0.04	0.00	0.00	0.04

## TOXIC EMISSIONS

Resource (Kg)	Upstream	Core	Downstream	Total
To the Air	152.92	693.09	262.05	1108.06
To the Ground	0.09	0.08	0.03	0.20
To the Water	15.93	11.46	3.89	31.29

## ENERGY CONSUMPTION

Material	Recycled Content of Material (% by weight)	Recycled Content In Product (% by weight)
Fabric	50.00	2.50
TFL	45.00	19.35
Aluminum Castings	100.00	8.00
Aluminum Extrusion	100.00	21.00
<b>Total</b>		<b>50.85</b>

## CERTIFICATES

Description	Certification	First Certified
Quality Assurance	ISO 9001	Certified 1991
Environmental Management	ISO 14001	Certified 2001
Chain of Custody	FSC®	Certified 2003
Sustainability	FISP	Certified 2006
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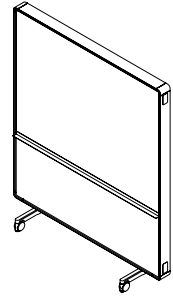
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# SENATOR

## Adapt Wall - AW7865MFD

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## PRODUCT SUMMARY

### Scope of Assessment:

From extraction of raw materials through to production of the final desking unit (cradle to gate).

See page 2 for more details.

### Data Used:

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All secondary data was obtained from the EcolInvent database, used in conjunction with SimaPro 7.3.2, using European data only.

### Functional Unit:

A desking solution designed and manufactured to last for 15 years.

### Regional Market:

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

## ENVIRONMENTAL

### Material Declaration Certificates

Material:	Amount (kg)	Total (%)
Fabric	2.66	3.71
Nylon (30% glass)	0.94	1.32
TFL	15.80	22.09
TFL	19.05	26.62
Plywood	7.44	10.40
Aluminum Castings	6.58	9.20
Aluminum Extrusion	16.98	23.74
Stainless Steel (304)	0.60	0.84
Zinc Castings	0.53	0.73
High Pressure	0.95	1.33

### Environmental Summary

Global Warming Potential (Kg Co2 Eq):	101.09
Recycled Content (% By Weight):	57.05
Total Energy Consumption (Mj):	3297.46
Recyclability (% By Weight):	99.00

Date of Production: 4th October 2021

## ENVIRONMENTAL PRODUCT ANALYSIS

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## In Use:

No relevant environmental exchange occurs during the "in use" phase and is not considered in this Life Cycle Analysis.

## End of Life:

End of life (recycling) is not considered in this Life Cycle Analysis however all of The Senator Group's products are considered to be 99% recyclable.

## Group:

The Senator Group offers a full recycle service for all it's customers and clients, to close the recycling loop.

## Upstream:

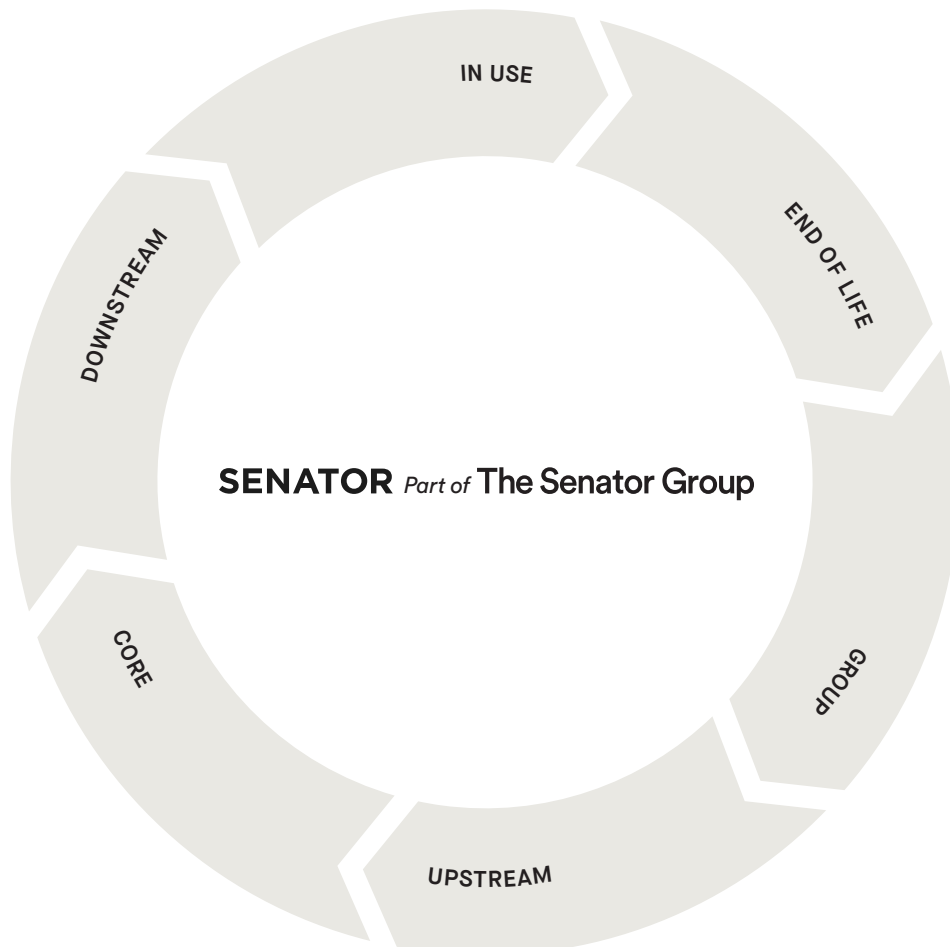
The upstream module of the product's life-cycle includes the extraction and treatment of raw materials, transport of the new material to the component suppliers and the manufacture of usable components from those materials.

## Core:

The core module of the product's life-cycle includes the transport of furniture components to The Senator Group's plants and the energy resources used during product assembly/packing/loading and transport.

## Downstream:

The Downstream module of the product's life-cycle includes transport of the product to The Senator Group's major market regions, using third transport vehicles.



## SYSTEM BOUNDARIES

Resource (Kg)	Upstream	Core	Downstream	Total
From the Air	114.61	1.34	0.01	115.96
From the Ground	63.90	23.30	3.35	90.55
From the Water	0.00	0.00	0.00	0.00

## ENERGY CONSUMPTION

Resource (Kg)	Upstream	Core	Downstream	Total
Biomass	1126.73	14.77	0.07	1281.57
Hydro	67.83	4.90	0.41	73.14
Solar	0.08	0.00	0.00	0.08
Wind	5.67	1.42	0.02	7.12
Non-Renewable Energy (MJ)	1610.49	285.94	39.12	1935.55
<b>Total</b>	<b>2950.80</b>	<b>307.04</b>	<b>39.62</b>	<b>3297.46</b>

## ENVIRONMENTAL IMPACT POTENTIAL

Resource (Kg)	Upstream	Core	Downstream	Total
Global Warming (Kg CO2 Equivalents)	82.72	16.07	2.30	101.09
Acidification (Kg SO2 Equivalents)	0.50	0.06	0.01	0.57
Eutrophication (Kg PO43 Equivalents)	0.06	0.00	0.00	0.06
Ozone Depletion (Kg CFC 11 Equivalents)	0.00	0.00	0.00	0.00
Photochemical Smog (Kg C2H4 Equivalents)	0.03	0.00	0.00	0.03

## TOXIC EMISSIONS

Resource (Kg)	Upstream	Core	Downstream	Total
To the Air	111.68	599.94	224.79	936.41
To the Ground	0.06	0.07	0.03	0.15
To the Water	13.74	10.08	3.34	27.16

## ENERGY CONSUMPTION

Material	Recycled Content of Material (% by weight)	Recycled Content In Product (% by weight)
Fabric	50.00	2.00
TFL	45.00	9.90
TFL	45.00	12.15
Aluminum Castings	100.00	9.00
Aluminum Extrusion	100.00	24.00
<b>Total</b>		<b>57.05</b>

## CERTIFICATES

Description	Certification	First Certified
Quality Assurance	ISO 9001	Certified 1991
Environmental Management	ISO 14001	Certified 2001
Chain of Custody	FSC®	Certified 2003
Sustainability	FISP	Certified 2006
Occupational Health & Safety Management	ISO 45001	Certified 2021



All UK manufacturing Sites are certified to ISO standards, 9001, 14001 and 45001. In addition to this our Desking, Seating Division, Specialist Product and Teal sites are certified to Chain of Custody. We can provide FSC® certified products upon request.

### Furniture Industry Sustainability Program:

Awarded by FIRA, 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 furniture industry – a public declaration of our commitment to improving our performance in every possible way.

### Chain of Custody:

Independent certification to prove Senator only purchases TFL/MDF/Chipboard from manufacturers who can prove they purchase their raw wood from sustainable sources.

### Business Principles:

The business works to the principles and through collaboration with our internal and external experts, we ensure that we have a robust, efficient and auditable system that ensure continuous improvement.

### Environmental Management:

From extraction of raw materials through to production of the final Office Furniture unit (cradle to gate).

See page 2 for more details.

## THE THREE R'S

Senator 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.

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–Reduce  
–Reuse  
–Recycle

## 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 16-32t Euro 6 lorries.

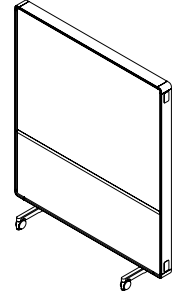
All LCA data was modeled using the IMPACT 2002+ (v2.06) method.



# SENATOR

## Adapt Wall - AW7865MF

This constant reaction to the change of an individual's daily working routine was the catalyst for Adapt. Born out of the idea to create mobile partitions — to enable more agile, fluid, and flexible spaces — empowering every user to create spaces that work for them at that moment.



## PRODUCT SUMMARY

### Scope of Assessment:

From extraction of raw materials through to production of the final desking 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 EcolInvent database, used in conjunction with SimaPro 7.3.2, using European data only.

### Functional Unit:

A desking solution designed and manufactured to last for 15 years.

### Regional Market:

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

## ENVIRONMENTAL

### Material Declaration Certificates

Material:	Amount (kg)	Total (%)
Fabric	9.00	12.05
Nylon (30% glass)	0.94	1.26
TFL	15.80	21.15
Plywood	24.56	32.88
Aluminum Castings	6.58	8.81
Aluminum Extrusion	16.70	22.35
Stainless Steel (304)	0.29	0.39
Zinc Castings	0.53	0.70
Steel	0.31	0.41

### Environmental Summary

Global Warming Potential (Kg Co2 Eq):	101.09
Recycled Content (% By Weight):	57.05
Total Energy Consumption (Mj):	3297.46
Recyclability (% By Weight):	99.00

**Date of Production: 4th October 2021**

## 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.)

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# SUSTAIN

---

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 minimize all environmental impacts of The Senator Group's products and processes.

We 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. The process of Sustainability is a cyclical one we understand this and we actively pursue this in everything that we do.

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## In Use:

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## End of Life:

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## Group:

The Senator Group offers a full recycle service for all it's customers and clients, to close the recycling loop.

## Upstream:

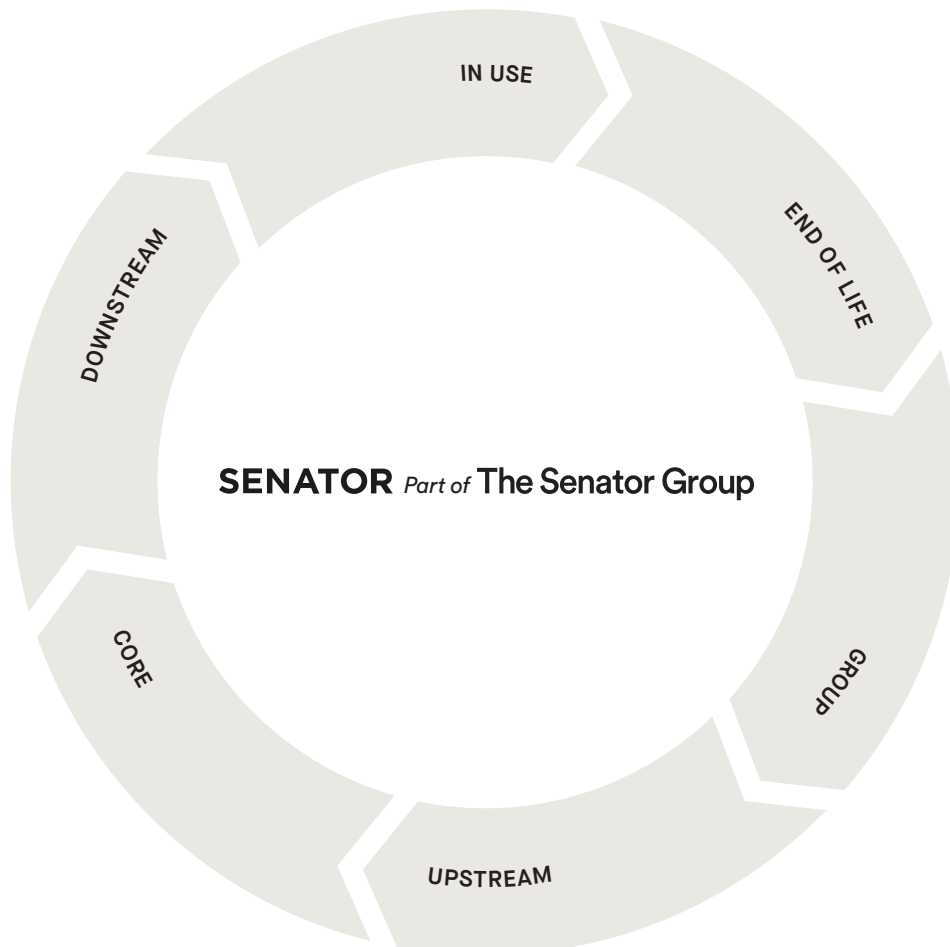
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## Downstream:

The Downstream module of the product's life-cycle includes transport of the product to The Senator Group's major market regions, using third transport vehicles.



## SYSTEM BOUNDARIES

Resource (Kg)	Upstream	Core	Downstream	Total
From the Air	166.51	1.34	0.01	167.86
From the Ground	115.38	23.68	3.49	142.55
From the Water	0.00	0.00	0.00	0.00

## ENERGY CONSUMPTION

Resource (Kg)	Upstream	Core	Downstream	Total
Biomass	1832.33	14.78	0.08	1847.19
Hydro	86.71	4.95	0.43	92.09
Solar	0.12	0.00	0.00	0.12
Wind	8.40	1.43	0.02	9.85
Non-Renewable Energy (MJ)	2230.39	290.29	40.86	2561.54
<b>Total</b>	<b>4157.95</b>	<b>311.45</b>	<b>41.39</b>	<b>4510.79</b>

## ENVIRONMENTAL IMPACT POTENTIAL

Resource (Kg)	Upstream	Core	Downstream	Total
Global Warming (Kg CO2 Equivalents)	117.39	16.32	2.40	136.11
Acidification (Kg SO2 Equivalents)	0.86	0.07	0.01	0.94
Eutrophication (Kg PO43 Equivalents)	0.07	0.00	0.00	0.07
Ozone Depletion (Kg CFC 11 Equivalents)	0.00	0.00	0.00	0.00
Photochemical Smog (Kg C2H4 Equivalents)	0.05	0.00	0.00	0.05

## TOXIC EMISSIONS

Resource (Kg)	Upstream	Core	Downstream	Total
To the Air	186.73	624.90	234.77	1046.40
To the Ground	0.11	0.07	0.03	0.21
To the Water	18.35	10.45	3.49	32.38

## ENERGY CONSUMPTION

Material	Recycled Content of Material (% by weight)	Recycled Content In Product (% by weight)
Fabric	50.00	6.00
TFL	45.00	9.45
Aluminum Castings	100.00	9.00
Aluminum Extrusion	100.00	22.00
<b>Total</b>		<b>46.45</b>

## CERTIFICATES

Description	Certification	First Certified
Quality Assurance	ISO 9001	Certified 1991
Environmental Management	ISO 14001	Certified 2001
Chain of Custody	FSC®	Certified 2003
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### Environmental Management:

From extraction of raw materials through to production of the final Office Furniture unit (cradle to gate).

See page 2 for more details.

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## ASSESSMENT CONSIDERATIONS

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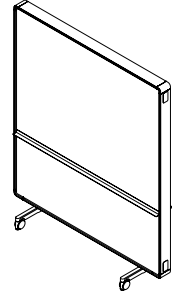
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# SENATOR

## Adapt Wall - AW7865MD

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## PRODUCT SUMMARY

### Scope of Assessment:

From extraction of raw materials through to production of the final desking unit (cradle to gate).

See page 2 for more details.

### Data Used:

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### Functional Unit:

A desking solution designed and manufactured to last for 15 years.

### Regional Market:

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

## ENVIRONMENTAL

### Material Declaration Certificates

Material:	Amount (kg)	Total (%)
Nylon (30% glass)	0.94	1.18
TFL	15.80	19.80
TFL	36.20	45.35
Aluminum Castings	6.58	8.24
Aluminum Extrusion	17.26	21.63
Stainless Steel (304)	0.29	0.36
Steel	0.31	0.39
Zinc Castings	0.53	0.66
High Pressure	1.91	2.39

### Environmental Summary

Global Warming Potential (Kg Co2 Eq):	92.32
Recycled Content (% By Weight):	59.25
Total Energy Consumption (Mj):	3154.93
Recyclability (% By Weight):	99.00

**Date of Production: 4th October 2021**

## ENVIRONMENTAL PRODUCT ANALYSIS

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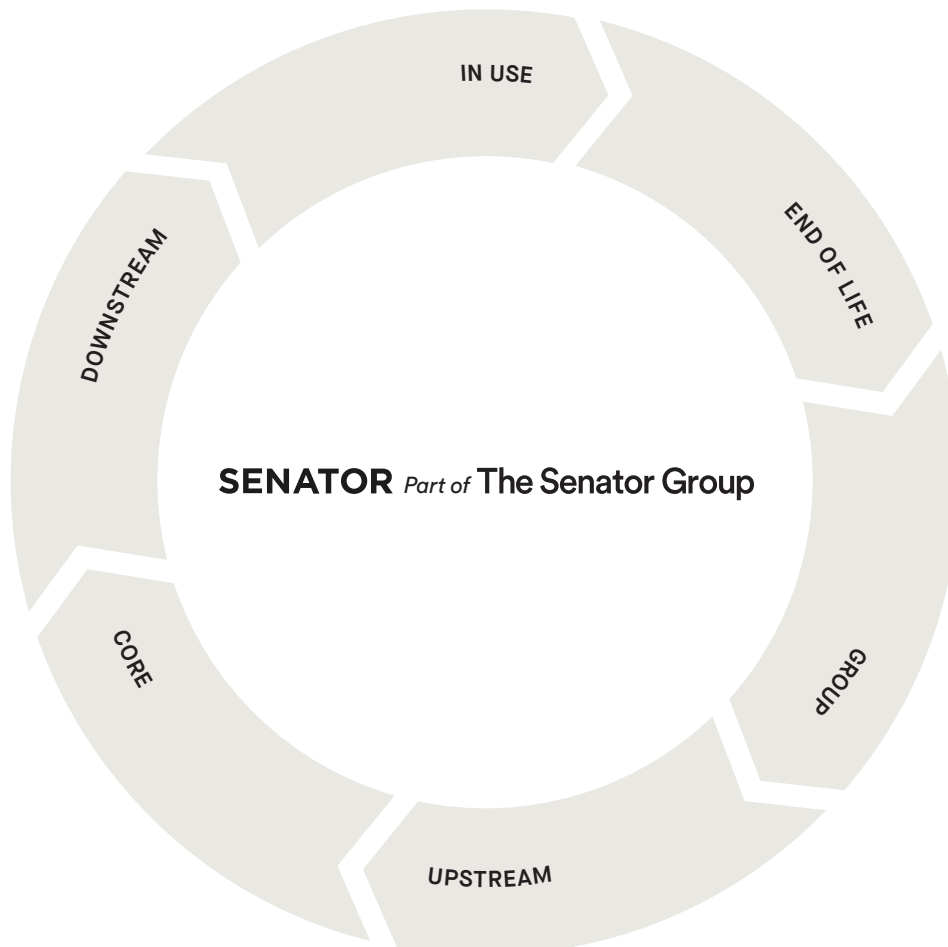
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## Downstream:

The Downstream module of the product's life-cycle includes transport of the product to The Senator Group's major market regions, using third transport vehicles.



## SYSTEM BOUNDARIES

Resource (Kg)	Upstream	Core	Downstream	Total
From the Air	113.27	1.34	0.01	114.62
From the Ground	44.47	24.27	3.73	72.47
From the Water	0.00	0.00	0.00	0.00

## ENERGY CONSUMPTION

Resource (Kg)	Upstream	Core	Downstream	Total
Biomass	1256.29	14.79	0.08	1271.16
Hydro	59.22	5.02	0.46	64.70
Solar	0.07	0.00	0.00	0.07
Wind	4.89	1.43	0.02	6.34
Non-Renewable Energy (MJ)	1471.76	297.26	43.64	1812.66
<b>Total</b>	<b>2792.23</b>	<b>318.50</b>	<b>44.20</b>	<b>3154.93</b>

## ENVIRONMENTAL IMPACT POTENTIAL

Resource (Kg)	Upstream	Core	Downstream	Total
Global Warming (Kg CO2 Equivalents)	73.03	16.73	2.56	92.32
Acidification (Kg SO2 Equivalents)	0.37	0.07	0.01	0.45
Eutrophication (Kg PO43 Equivalents)	0.05	0.00	0.00	0.05
Ozone Depletion (Kg CFC 11 Equivalents)	0.00	0.00	0.00	0.00
Photochemical Smog (Kg C2H4 Equivalents)	0.02	0.00	0.00	0.02

## TOXIC EMISSIONS

Resource (Kg)	Upstream	Core	Downstream	Total
To the Air	88.03	664.95	250.79	1003.77
To the Ground	0.03	0.08	0.03	0.14
To the Water	11.95	11.05	3.73	26.72

## ENERGY CONSUMPTION

Material	Recycled Content of Material (% by weight)	Recycled Content In Product (% by weight)
TFL	45.00	9.00
TFL	45.00	20.25
Aluminum Castings	100.00	8.00
Aluminum Extrusion	100.00	22.00
<b>Total</b>		<b>59.25</b>

## CERTIFICATES

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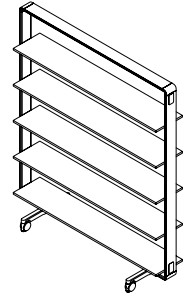
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# SENATOR

## Adapt Wall - AW7865SH5

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## PRODUCT SUMMARY

### Scope of Assessment:

From extraction of raw materials through to production of the final desking unit (cradle to gate).

See page 2 for more details.

### Data Used:

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### Functional Unit:

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### Regional Market:

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

## ENVIRONMENTAL

### Material Declaration Certificates

Material:	Amount (kg)	Total (%)
Nylon (30% glass)	0.60	1.14
Aluminum Castings	6.58	12.42
Aluminum Extrusion	15.67	29.57
Stainless Steel (304)	0.29	0.55
Steel	29.33	55.34
Zinc Castings	0.53	0.99

### Environmental Summary

Global Warming Potential (Kg Co2 Eq):	127.75
Recycled Content (% By Weight):	69.50
Total Energy Consumption (Mj):	2353.25
Recyclability (% By Weight):	99.00

**Date of Production: 4th October 2021**

## ENVIRONMENTAL PRODUCT ANALYSIS

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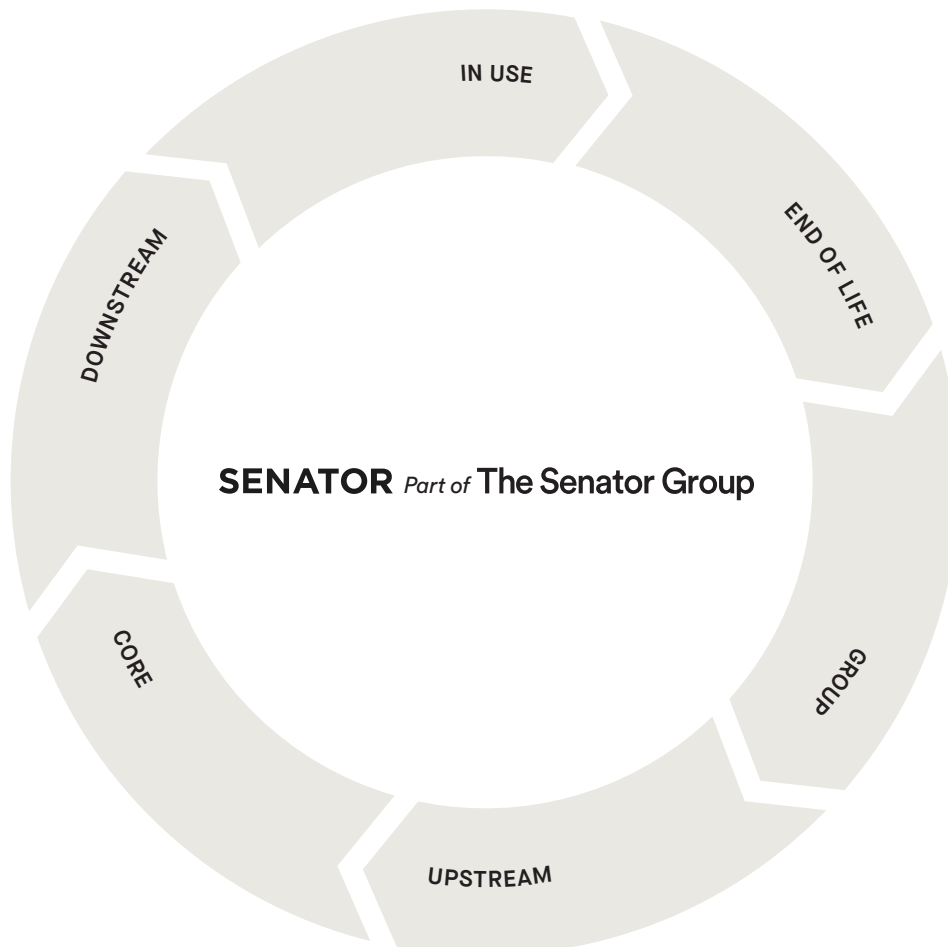
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## Downstream:

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## SYSTEM BOUNDARIES

Resource (Kg)	Upstream	Core	Downstream	Total
From the Air	3.62	1.33	0.01	4.96
From the Ground	114.43	21.14	2.48	138.05
From the Water	0.00	0.00	0.00	0.00

## ENERGY CONSUMPTION

Resource (Kg)	Upstream	Core	Downstream	Total
Biomass	37.63	14.72	0.05	52.40
Hydro	93.50	4.64	0.31	98.45
Solar	0.10	0.00	0.00	0.10
Wind	6.82	1.42	0.01	8.25
Non-Renewable Energy (MJ)	1904.47	260.60	23.98	2194.05
<b>Total</b>	<b>2042.52</b>	<b>281.38</b>	<b>29.35</b>	<b>2353.25</b>

## ENVIRONMENTAL IMPACT POTENTIAL

Resource (Kg)	Upstream	Core	Downstream	Total
Global Warming (Kg CO2 Equivalents)	111.47	14.58	1.70	127.75
Acidification (Kg SO2 Equivalents)	0.52	0.06	0.01	0.59
Eutrophication (Kg PO43 Equivalents)	0.07	0.00	0.00	0.07
Ozone Depletion (Kg CFC 11 Equivalents)	0.00	0.00	0.00	0.00
Photochemical Smog (Kg C2H4 Equivalents)	0.03	0.00	0.00	0.03

## TOXIC EMISSIONS

Resource (Kg)	Upstream	Core	Downstream	Total
To the Air	114.51	454.28	166.53	735.31
To the Ground	0.09	0.05	0.02	0.17
To the Water	19.36	7.92	2.47	29.75

## ENERGY CONSUMPTION

Material	Recycled Content of Material (% by weight)	Recycled Content In Product (% by weight)
Aluminum Castings	100.00	12.00
Aluminum Extrusion	100.00	30.00
Steel	50.00	27.50
<b>Total</b>		<b>69.50</b>

## CERTIFICATES

Description	Certification	First Certified
Quality Assurance	ISO 9001	Certified 1991
Environmental Management	ISO 14001	Certified 2001
Chain of Custody	FSC®	Certified 2003
Sustainability	FISP	Certified 2006
Occupational Health & Safety Management	ISO 45001	Certified 2021



All UK manufacturing Sites are certified to ISO standards, 9001, 14001 and 45001. In addition to this our Desking, Seating Division, Specialist Product and Teal sites are certified to Chain of Custody. We can provide FSC® certified products upon request.

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Independent certification to prove Senator only purchases TFL/MDF/Chipboard from manufacturers who can prove they purchase their raw wood from sustainable sources.

### Business Principles:

The business works to the principles and through collaboration with our internal and external experts, we ensure that we have a robust, efficient and auditable system that ensure continuous improvement.

### Environmental Management:

From extraction of raw materials through to production of the final Office Furniture unit (cradle to gate).

See page 2 for more details.

## THE THREE R'S

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– Reduce  
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## 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.

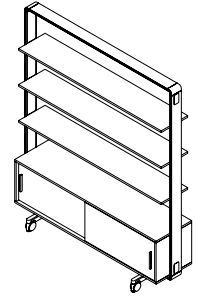
The transport of all materials, components and finished products was assumed to be via 16-32t Euro 6 lorries.

All LCA data was modeled using the IMPACT 2002+ (v2.06) method.

# SENATOR

## Adapt Wall - AW7865SH3SL

This constant reaction to the change of an individual's daily working routine was the catalyst for Adapt. Born out of the idea to create mobile partitions — to enable more agile, fluid, and flexible spaces — empowering every user to create spaces that work for them at that moment.



## PRODUCT SUMMARY

### Scope of Assessment:

From extraction of raw materials through to production of the final desking 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 EcolInvent database, used in conjunction with SimaPro 7.3.2, using European data only.

### Functional Unit:

A desking solution designed and manufactured to last for 15 years.

### Regional Market:

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

## ENVIRONMENTAL

### Material Declaration Certificates

Material:	Amount (kg)	Total (%)
Nylon (30% glass)	0.60	0.78
TFL	34.60	44.72
Aluminum Castings	6.86	8.87
Aluminum Extrusion	16.80	21.71
Stainless Steel (304)	0.29	0.37
Steel	17.70	22.87
Zinc Castings	0.53	0.68

### Environmental Summary

Global Warming Potential (Kg Co2 Eq):	115.55
Recycled Content (% By Weight):	62.75
Total Energy Consumption (Mj):	2881.55
Recyclability (% By Weight):	99.00

**Date of Production: 4th October 2021**

## 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.

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# SUSTAIN

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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 minimize all environmental impacts of The Senator Group's products and processes.

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

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---

## In Use:

No relevant environmental exchange occurs during the "in use" phase and is not considered in this Life Cycle Analysis.

## End of Life:

End of life (recycling) is not considered in this Life Cycle Analysis however all of The Senator Group's products are considered to be 99% recyclable.

## Group:

The Senator Group offers a full recycle service for all it's customers and clients, to close the recycling loop.

## Upstream:

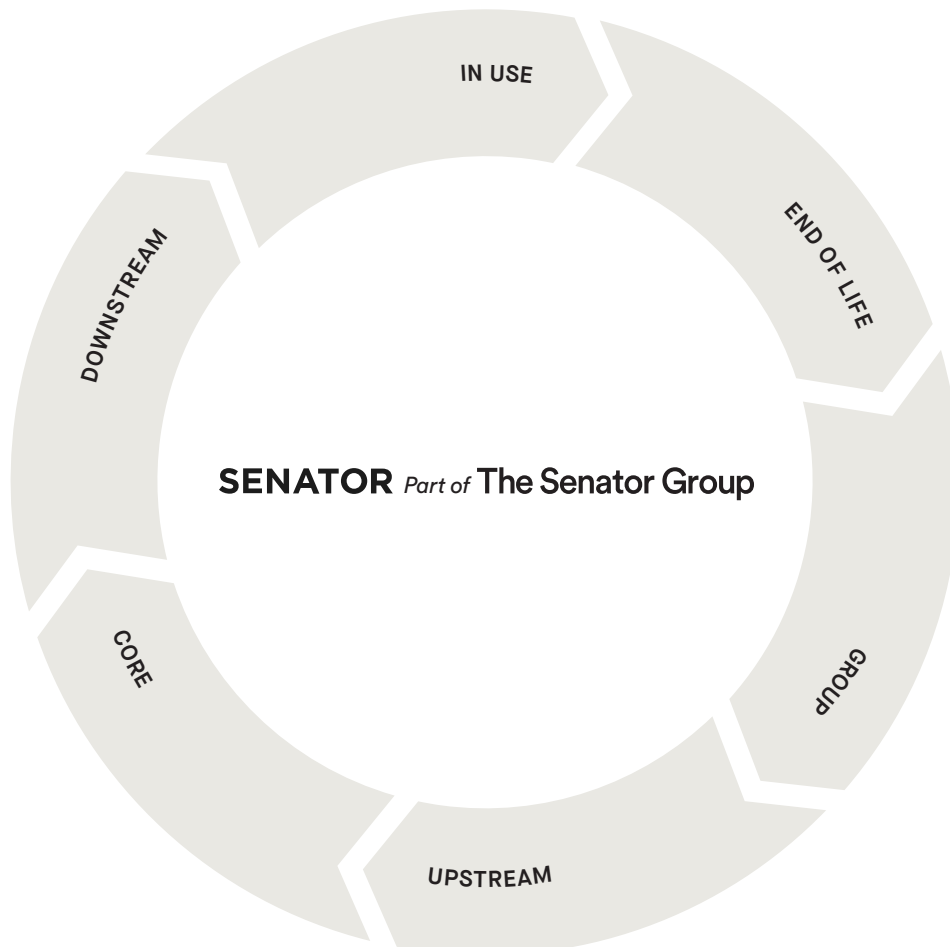
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## Downstream:

The Downstream module of the product's life-cycle includes transport of the product to The Senator Group's major market regions, using third transport vehicles.



## SYSTEM BOUNDARIES

Resource (Kg)	Upstream	Core	Downstream	Total
From the Air	62.91	1.34	0.01	64.26
From the Ground	87.54	23.99	3.62	115.15
From the Water	0.00	0.00	0.00	0.00

## ENERGY CONSUMPTION

Resource (Kg)	Upstream	Core	Downstream	Total
Biomass	3696.31	14.79	0.08	711.18
Hydro	80.09	4.99	0.45	85.53
Solar	0.08	0.00	0.00	0.08
Wind	5.97	1.43	0.02	7.42
Non-Renewable Energy (MJ)	1741.10	292.93	42.31	2077.34
<b>Total</b>	<b>2523.55</b>	<b>315.14</b>	<b>42.86</b>	<b>2881.55</b>

## ENVIRONMENTAL IMPACT POTENTIAL

Resource (Kg)	Upstream	Core	Downstream	Total
Global Warming (Kg CO2 Equivalents)	96.52	16.54	2.49	115.55
Acidification (Kg SO2 Equivalents)	0.47	0.07	0.01	0.55
Eutrophication (Kg PO43 Equivalents)	0.06	0.00	0.00	0.06
Ozone Depletion (Kg CFC 11 Equivalents)	0.00	0.00	0.00	0.00
Photochemical Smog (Kg C2H4 Equivalents)	0.03	0.00	0.00	0.03

## TOXIC EMISSIONS

Resource (Kg)	Upstream	Core	Downstream	Total
To the Air	103.28	645.82	243.14	992.24
To the Ground	0.07	0.07	0.03	0.17
To the Water	16.50	10.76	3.61	30.87

## ENERGY CONSUMPTION

Material	Recycled Content of Material (% by weight)	Recycled Content In Product (% by weight)
TFL	45.00	20.25
Aluminum Castings	100.00	9.00
Aluminum Extrusion	100.00	22.00
Steel	50.00	11.50
<b>Total</b>		<b>62.75</b>

## CERTIFICATES

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Quality Assurance	ISO 9001	Certified 1991
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From extraction of raw materials through to production of the final Office Furniture unit (cradle to gate).

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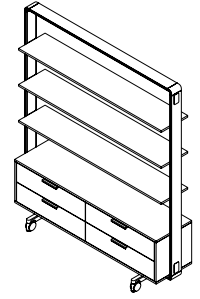
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# SENATOR

## Adapt Wall - AW7865SH3DW4

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## PRODUCT SUMMARY

### Scope of Assessment:

From extraction of raw materials through to production of the final desking 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 EcolInvent database, used in conjunction with SimaPro 7.3.2, using European data only.

### Functional Unit:

A desking solution designed and manufactured to last for 15 years.

### Regional Market:

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

## ENVIRONMENTAL

### Material Declaration Certificates

Material:	Amount (kg)	Total (%)
Nylon (30% glass)	0.86	0.86
TFL	35.38	35.11
Aluminum Castings	6.86	6.81
Aluminum Extrusion	15.67	15.55
Stainless Steel (304)	0.29	0.29
Steel	41.20	40.88
Zinc Castings	0.53	0.52

### Environmental Summary

Global Warming Potential (Kg Co2 Eq):	177.31
Recycled Content (% By Weight):	59.25
Total Energy Consumption (Mj):	3970.70
Recyclability (% By Weight):	99.00

**Date of Production: 4th October 2021**

## ENVIRONMENTAL PRODUCT ANALYSIS

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## In Use:

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## End of Life:

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## Group:

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## Upstream:

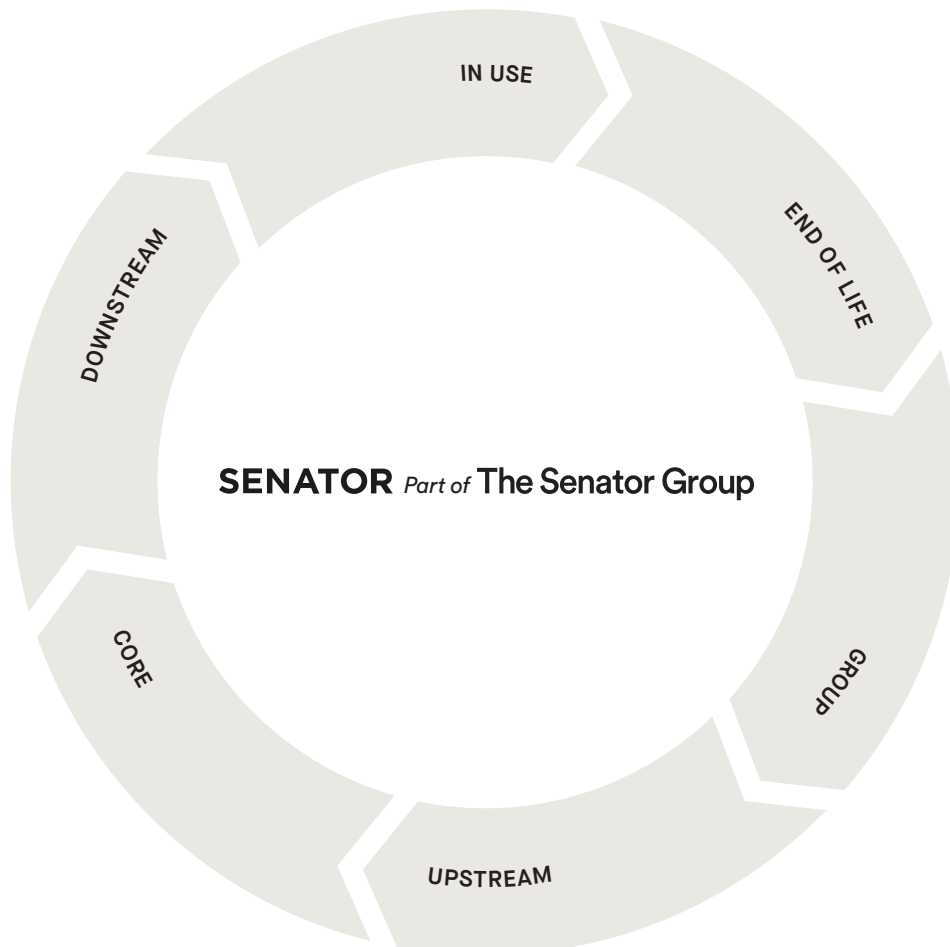
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## Downstream:

The Downstream module of the product's life-cycle includes transport of the product to The Senator Group's major market regions, using third transport vehicles.



## SYSTEM BOUNDARIES

Resource (Kg)	Upstream	Core	Downstream	Total
From the Air	65.26	1.35	0.01	66.62
From the Ground	160.66	26.72	4.71	192.09
From the Water	0.00	0.00	0.00	0.00

## ENERGY CONSUMPTION

Resource (Kg)	Upstream	Core	Downstream	Total
Biomass	721.17	14.85	0.10	736.12
Hydro	120.03	5.33	0.58	125.94
Solar	0.13	0.00	0.00	0.13
Wind	9.18	1.45	0.02	10.65
Non-Renewable Energy (MJ)	2716.82	325.93	55.11	3097.86
<b>Total</b>	<b>3567.33</b>	<b>347.56</b>	<b>55.81</b>	<b>3970.70</b>

## ENVIRONMENTAL IMPACT POTENTIAL

Resource (Kg)	Upstream	Core	Downstream	Total
Global Warming (Kg CO2 Equivalents)	155.65	18.42	3.24	177.31
Acidification (Kg SO2 Equivalents)	0.71	0.08	0.02	0.81
Eutrophication (Kg PO43 Equivalents)	0.08	0.00	0.00	0.08
Ozone Depletion (Kg CFC 11 Equivalents)	0.00	0.00	0.00	0.00
Photochemical Smog (Kg C2H4 Equivalents)	0.05	0.01	0.00	0.06

## TOXIC EMISSIONS

Resource (Kg)	Upstream	Core	Downstream	Total
To the Air	164.77	829.74	316.71	1311.22
To the Ground	0.14	0.10	0.04	0.27
To the Water	24.58	13.49	4.70	42.78

## ENERGY CONSUMPTION

Material	Recycled Content of Material (% by weight)	Recycled Content In Product (% by weight)
TFL	45.00	15.75
Aluminum Castings	100.00	7.00
Aluminum Extrusion	100.00	16.00
Steel	50.00	20.50
<b>Total</b>		<b>59.25</b>

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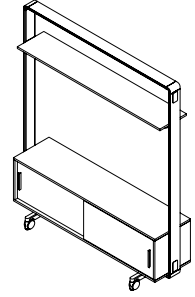
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# SENATOR

## Adapt Wall - AW7865CHSL

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## PRODUCT SUMMARY

### Scope of Assessment:

From extraction of raw materials through to production of the final desking unit (cradle to gate).

See page 2 for more details.

### Data Used:

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### Functional Unit:

A desking solution designed and manufactured to last for 15 years.

### Regional Market:

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

## ENVIRONMENTAL

### Material Declaration Certificates

Material:	Amount (kg)	Total (%)
Nylon (30% glass)	0.60	0.90
TFL	34.60	51.64
Aluminum Castings	6.86	10.24
Aluminum Extrusion	16.80	25.08
Stainless Steel (304)	0.20	0.30
Steel	7.41	11.06
Zinc Castings	0.53	0.78

### Environmental Summary

Global Warming Potential (Kg Co2 Eq):	88.03
Recycled Content (% By Weight):	63.90
Total Energy Consumption (Mj):	2407.48
Recyclability (% By Weight):	99.00

**Date of Production: 4th October 2021**

## ENVIRONMENTAL PRODUCT ANALYSIS

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## Group:

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## Upstream:

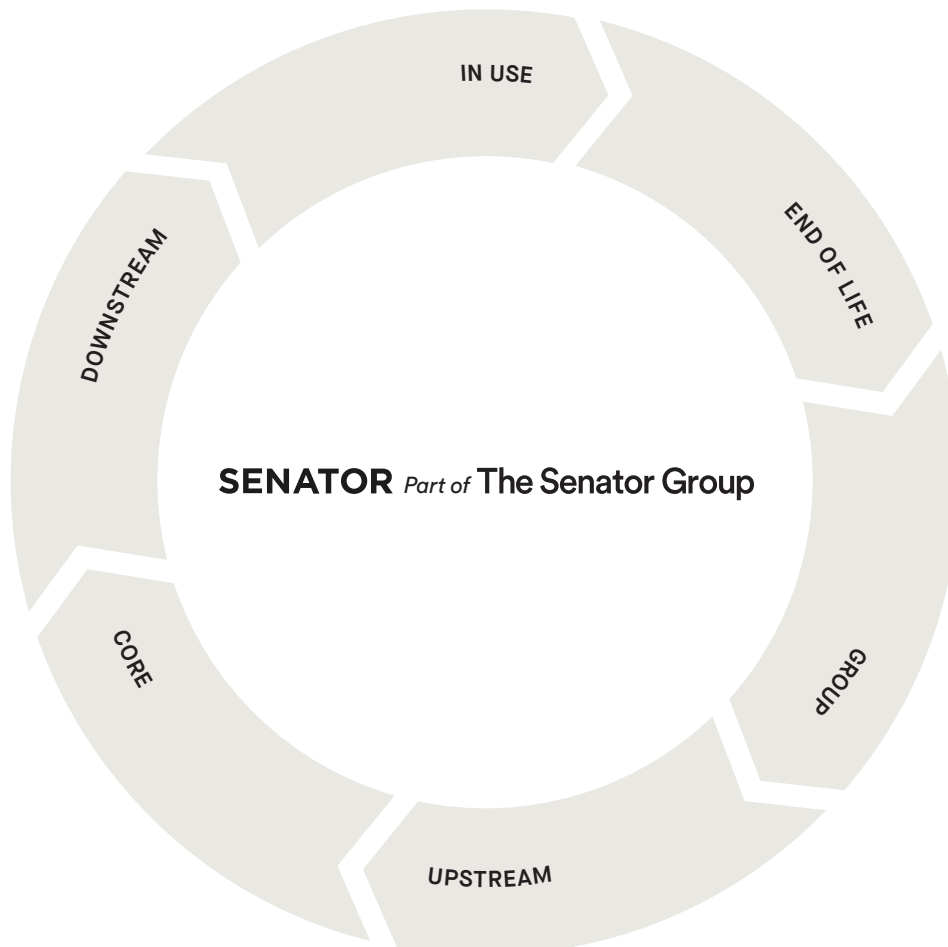
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## Downstream:

The Downstream module of the product's life-cycle includes transport of the product to The Senator Group's major market regions, using third transport vehicles.



## SYSTEM BOUNDARIES

Resource (Kg)	Upstream	Core	Downstream	Total
From the Air	62.42	1.34	0.01	63.77
From the Ground	55.00	22.77	3.13	80.90
From the Water	0.00	0.00	0.00	0.00

## ENERGY CONSUMPTION

Resource (Kg)	Upstream	Core	Downstream	Total
Biomass	691.56	14.76	0.07	706.39
Hydro	61.06	4.84	0.39	66.29
Solar	0.06	0.00	0.00	0.06
Wind	4.51	1.43	0.02	5.96
Non-Renewable Energy (MJ)	1312.40	279.74	36.63	1628.78
<b>Total</b>	<b>2069.59</b>	<b>300.77</b>	<b>37.12</b>	<b>2407.48</b>

## ENVIRONMENTAL IMPACT POTENTIAL

Resource (Kg)	Upstream	Core	Downstream	Total
Global Warming (Kg CO2 Equivalents)	70.44	15.71	2.15	88.30
Acidification (Kg SO2 Equivalents)	0.36	0.06	0.01	0.43
Eutrophication (Kg PO43 Equivalents)	0.06	0.00	0.00	0.06
Ozone Depletion (Kg CFC 11 Equivalents)	0.00	0.00	0.00	0.00
Photochemical Smog (Kg C2H4 Equivalents)	0.03	0.01	0.00	.003

## TOXIC EMISSIONS

Resource (Kg)	Upstream	Core	Downstream	Total
To the Air	76.13	564.31	210.54	850.97
To the Ground	0.04	0.06	0.02	0.13
To the Water	12.78	9.55	3.13	25.45

## ENERGY CONSUMPTION

Material	Recycled Content of Material (% by weight)	Recycled Content In Product (% by weight)
TFL	45.00	23.40
Aluminum Castings	100.00	10.00
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Steel	50.00	5.50
<b>Total</b>		<b>63.90</b>

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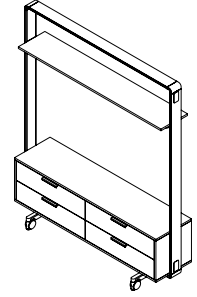
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# SENATOR

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## PRODUCT SUMMARY

### Scope of Assessment:

From extraction of raw materials through to production of the final desking 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 EcolInvent database, used in conjunction with SimaPro 7.3.2, using European data only.

### Functional Unit:

A desking solution designed and manufactured to last for 15 years.

### Regional Market:

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

## ENVIRONMENTAL

### Material Declaration Certificates

Material:	Amount (kg)	Total (%)
Nylon (30% glass)	0.86	0.95
TFL	35.38	39.10
Aluminum Castings	6.86	7.58
Aluminum Extrusion	15.67	17.32
Stainless Steel (304)	0.29	0.32
Steel	30.91	34.16
Zinc Castings	0.53	0.58

### Environmental Summary

Global Warming Potential (Kg Co2 Eq):	150.54
Recycled Content (% By Weight):	59.55
Total Energy Consumption (Mj):	3504.84
Recyclability (% By Weight):	99.00

**Date of Production: 4th October 2021**

## 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.)

# SUSTAIN

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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 minimize all environmental impacts of The Senator Group's products and processes.

We 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. The process of Sustainability is a cyclical one we understand this and we actively pursue this in everything that we do.

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## In Use:

No relevant environmental exchange occurs during the "in use" phase and is not considered in this Life Cycle Analysis.

## End of Life:

End of life (recycling) is not considered in this Life Cycle Analysis however all of The Senator Group's products are considered to be 99% recyclable.

## Group:

The Senator Group offers a full recycle service for all it's customers and clients, to close the recycling loop.

## Upstream:

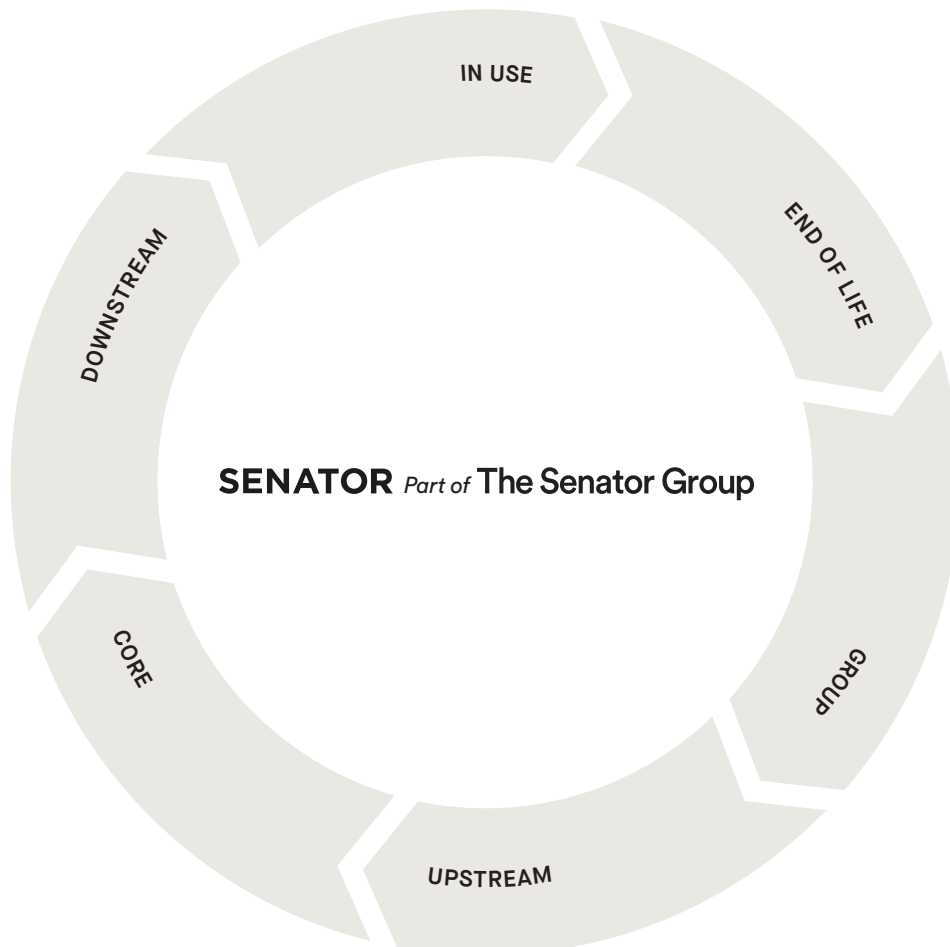
The upstream module of the product's life-cycle includes the extraction and treatment of raw materials, transport of the new material to the component suppliers and the manufacture of usable components from those materials.

## Core:

The core module of the product's life-cycle includes the transport of furniture components to The Senator Group's plants and the energy resources used during product assembly/packing/loading and transport.

## Downstream:

The Downstream module of the product's life-cycle includes transport of the product to The Senator Group's major market regions, using third transport vehicles.



## SYSTEM BOUNDARIES

Resource (Kg)	Upstream	Core	Downstream	Total
From the Air	64.79	1.34	0.01	66.14
From the Ground	128.66	25.52	4.23	158.41
From the Water	0.00	0.00	0.00	0.00

## ENERGY CONSUMPTION

Resource (Kg)	Upstream	Core	Downstream	Total
Biomass	716.49	14.82	0.09	731.40
Hydro	101.93	5.18	0.52	107.63
Solar	0.11	0.00	0.00	0.11
Wind	7.74	1.44	0.02	9.20
Non-Renewable Energy (MJ)	2295.14	311.87	49.49	2656.50
<b>Total</b>	<b>3121.41</b>	<b>333.31</b>	<b>50.12</b>	<b>3504.84</b>

## ENVIRONMENTAL IMPACT POTENTIAL

Resource (Kg)	Upstream	Core	Downstream	Total
Global Warming (Kg CO2 Equivalents)	130.04	17.59	2.91	150.54
Acidification (Kg SO2 Equivalents)	0.60	0.07	0.01	0.68
Eutrophication (Kg PO43 Equivalents)	0.07	0.00	0.00	0.07
Ozone Depletion (Kg CFC 11 Equivalents)	0.00	0.00	0.00	0.00
Photochemical Smog (Kg C2H4 Equivalents)	0.04	0.01	0.00	0.05

## TOXIC EMISSIONS

Resource (Kg)	Upstream	Core	Downstream	Total
To the Air	138.09	748.93	284.39	1171.41
To the Ground	0.11	0.09	0.03	0.23
To the Water	20.96	12.29	4.22	37.48

## ENERGY CONSUMPTION

Material	Recycled Content of Material (% by weight)	Recycled Content In Product (% by weight)
TFL	45.00	17.55
Aluminum Castings	100.00	8.00
Aluminum Extrusion	100.00	17.00
Steel	50.00	17.00
<b>Total</b>		<b>59.55</b>

## CERTIFICATES

Description	Certification	First Certified
Quality Assurance	ISO 9001	Certified 1991
Environmental Management	ISO 14001	Certified 2001
Chain of Custody	FSC®	Certified 2003
Sustainability	FISP	Certified 2006
Occupational Health & Safety Management	ISO 45001	Certified 2021



All UK manufacturing Sites are certified to ISO standards, 9001, 14001 and 45001. In addition to this our Desking, Seating Division, Specialist Product and Teal sites are certified to Chain of Custody. We can provide FSC® certified products upon request.

### Furniture Industry Sustainability Program:

Awarded by FIRA, 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 furniture industry – a public declaration of our commitment to improving our performance in every possible way.

### Chain of Custody:

Independent certification to prove Senator only purchases TFL/MDF/Chipboard from manufacturers who can prove they purchase their raw wood from sustainable sources.

### Business Principles:

The business works to the principles and through collaboration with our internal and external experts, we ensure that we have a robust, efficient and auditable system that ensure continuous improvement.

### Environmental Management:

From extraction of raw materials through to production of the final Office Furniture unit (cradle to gate).

See page 2 for more details.

## THE THREE R'S

Senator 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**.

– Reduce  
– Reuse  
– Recycle

## 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 16-32t Euro 6 lorries.

All LCA data was modeled using the IMPACT 2002+ (v2.06) method.