# Flex High Back SI1601



**Declaration Owner**
Andreu World
Calle de los Sauces 7
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**Product**
SI1601 Flex High Back

**Functional Unit**
One seating unit to seat one individual for a reference warranty of 10 years and service life of 50 years. The reference unit used in the study is one complete product.

**Data**
Published on Nov 3, 2025
Last updated on Nov 3, 2025
Valid until Nov 3, 2030

**Product Category Rule**
Sector: Construction Product
PCR: EPD Hub Core PCR Version 1.2, 24 Mar 2025

| | |
|---|---|
| **Declaration Owner** | Andreu World S.L |
| **Address:** | Calle de los Sauces 7, 46370, Chiva (Comunidad Valenciana) |
| **Contact details:** | 961 80 57 00 |
| **Website:** | www.andreuworld.com |
| **Product Group** | Seating |
| **Collection** | Flex High Back |
| **Reference** | SI1601 |
| **Product reference service life** | 50 years |
| **Product warranty** | 10 years |
| **Reference standard** | EN 15804+A2:2019 and ISO 14025 |
| **EPD Scope** | Cradle-to-grave |
| **PCR** | EPD Hub Core PCR Version 1.2, 24 Mar 2025 |
| **Sector** | Construction product |
| **Intended audience** | Business-to-business and/or business-to-consumer communication |
| **Period of data** | Calendar year 2024 |
| **Functional Unit** | One seating unit to seat one individual for a reference warranty of 10 years and service life of 50 years. The reference unit used in the study is one complete product. |
| **Published on** | Nov 3, 2025 |
| **Last updated** | Nov 3, 2025 |
| **Valid until** | Nov 3, 2030 |
| **Additional labels** | FSC®<br>BCorp<br>ISO 14006<br>ISO 14001<br>ISO 9001<br>level® 3 certified to ANSI/BIFMA e3 Standard<br>Indoor Air Quality-Advantage™ Gold<br>Global Reporting Initiative<br>Cradle to Cradle Certified®<br>OK Biobased<br>Green health Approved<br>Carbon Neutral Company<br>100% Pure ECO®<br>Zero Waste |
| **Place(s) of the raw materials origin** | Europe |
| **Place of Production** | Valencia, Spain. |
| **Place of installation and use** | Global |
| **LCA data base** | Ecoinvent 3.10.1 |

## 1. Product description

Flex High Back stands out for a slightly higher backrest, which provides it with a differentiated aesthetic and greater comfort, as well as its thoughtfulness and versatility of use. Its shell offers different upholstery versions, which can be combined with practically our entire catalog of bases. It is the perfect office chair and also an elegant solution in hospitality projects or large installations.

Chair with Pure Eco thermo-polymer (100% recycled) available in several colors and a 4-legs solid beech wood base. Available options : Upholstered seat pad, upholstered shell pad, fully upholstered shell and parallel stitching upholstery. Fire retardant version ava lable, for further information contact our Sales Department.



## 2. Andreu World

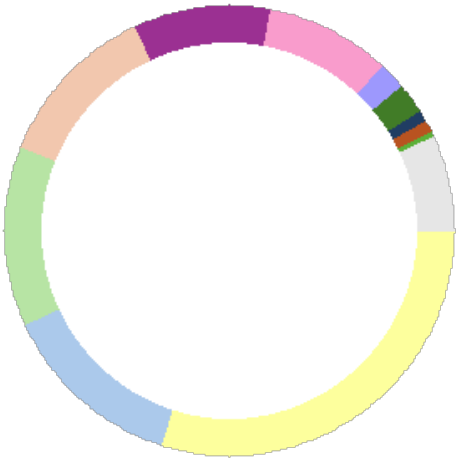
Andreu World is a global manufacturer and a leading company in sustainable design, recognized as the first in the furniture industry to certify its entire product catalog under the Cradle to Cradle standard for the circular economy. It operates as a zero-waste, carbon-neutral company and is proudly certified as a B Corp. Founded in 1955, Andreu World is a family-owned global brand known for creating high-quality, exceptionally comfortable, and sustainable seating and tables for hotels, restaurants, offices, homes, and outdoor spaces. In collaboration with internationally renowned designers such as Philippe Starck and Patricia Urquiola, Andreu World combines timeless design and environmental commitment, using FSC®-certified wood and sustainable materials such as Pure ECO® and BIO® Thermopolymer. With over 600 employees, 4 factories, and 33 showrooms worldwide, Andreu World is present in more than 90 countries and is a member of the Leading Brands of Spain Forum. The company has received major design awards, including the Red Dot and Spain’s National Design Award, and supports emerging talent through its prestigious International Design Contest.

## 3. Materials

### 3.1 Product Composition

| Material | Cas Number | Weight % |
|---|---|---|
| Polypropylene | 9003-07-0 | 30-31% |
| Wood | 67-56-1 | 13-14 % |
| Steel | 7439-89-6 | 13-14% |
| ABS | 9003-56-9 | 12-13% |
| Aluminum | 7429-90-5 | 10-11% |
| Coating | 9003-01-4 | 9-10% |
| Polyurethane foam | 9009-54-5 | 2-3% |
| Fabric | 25667-42-9 | 2-3% |
| MS polymer | 7085-85-0 | 1-2% |
| Polyethylene terephthalate | 25038-59-9 | 0,8-0,9% |
| Methyl methacrylate | 80-62-6 | 0,07-0,08% |
| Zinc | 7440-66-6 | 0,05-0,10% |
| Polyester | 25038-59-9 | 0,03-0,05% |
| Polystyrene | 9003-53-6 | 0,01-0,05% |
| Cotton | 9004-34-6 | 0,01-0,02% |

**Total material components**

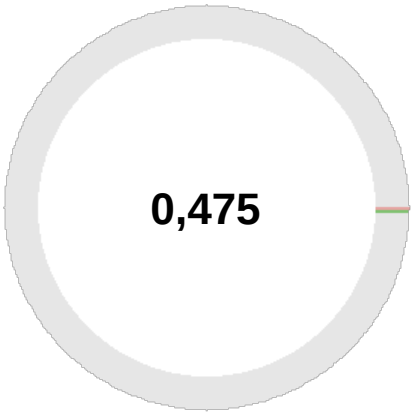


### 3.2 Product packaging composition

| Material | Cas Number | Weight % |
|---|---|---|
| Cardboard | 65996-61-4 | 84-85% |
| LDPE | 9002-88-4 | 10-12% |
| Hotmelt | 63393-89-5 | 3-5% |

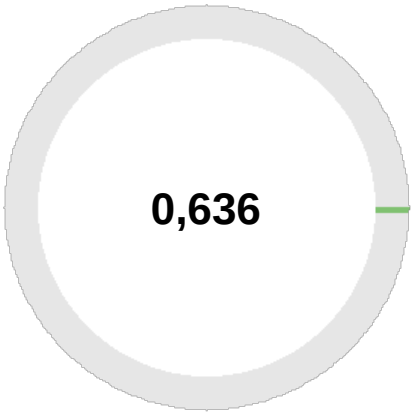
### 3.3 Summary of product recycled content and recyclability

**Product recycled content**



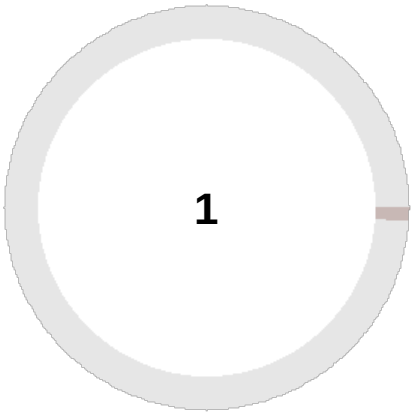

Pre-Consumer 0,256
Post-Consumer 0,219

**Packaging recycled content**




Post-Consumer 0,636

**Product recyclability**




Recyclable 1

### 3.4 End of life

The product can be disassembled using standard hand tools. It contains only a few different materials, making it easy to sort for recycling. The main tools required are a manual or electric screwdriver, a staple remover, scissors, a cutter, etc. Andreu World can provide disassembly drawings if necessary.

### Packaging

| | | |
|---|---|---|
| Polyurethane foam Recycling center |  | Recycling center |
| Cardboard Paper / Cardboard container |  | Paper / Cardboard container |
| Film Plastic / Metal container |  | Plastic / Metal container |

### Product

| | | |
|---|---|---|
| All separated materials |  | Recycling center |

## 4. Assessment boundary

Life Cycle Assessment covers all stages of the product life cycle, from origin to disposal, including raw material extraction and processing, transport, product manufacture, delivery, installation and use, and finally disposal. It also considers the environmental burdens and benefits derived from recycled materials leaving the product system (Stage D).

| | Stage | Scope | |
|---|---|---|---|
| **MATERIALS ADQUISITION** | A1. Raw materials | Extraction and processing of raw materials for the product components. | ✓ |
| | A2. Transport | Transport of component materials to the manufacturing facilities | ✓ |
| **PRODUCTION PROCESS** | A3. Manufacturing | Manufacturing of the product and packaging | ✓ |
| **DISTRIBUTION AND INSTALLATION** | A4. Transport | Transport of the product (including packaging) to the building site | ✓ |
| | A5. Assembly | Impacts from the installation of the product are assumed negligible with no installation wastage. Only impacts from packaging disposal are included in this stage. | — |
| **USE** | B1. Use | Use of the product in commercial building setting. There are no associated emissions or impacts from the use of the product. | — |
| | B2. Maintenance | Impacts associated with product maintenance are negligible. | — |
| | B3. Repair | The products are not expected to require repair over their lifetime. | — |
| | B4. Replacement | The products are not expected to require replacement over their lifetime | — |
| | B.5 Refurbishment | The products are not expected to require refurbishment over their lifetime. | — |
| | B.6 Operational energy use | There is no operational energy use associated with the use of the product. | — |
| | B.7 Operational water use | There is no operational water use associated with the use of the product. | — |
| **END OF LIFE** | C1. Deconstruction/ demolition | Demolition of the product is accomplished using hand tools with no associated emissions and negligible impacts. | — |
| | C2. Transport | Transport of the product to waste treatment at end of life. | ✓ |
| | C3. Waste processing | The products are disposed of by recycling, landfilling or incineration which require no waste processing. | ✓ |
| | C4. Disposal | Disposal of the product. | ✓ |
| **BENEFITS AND LOADS BEYOND THE BOUNDARY** | D. Reuse, Recovery and Recycling | Supplementary information regarding the potential net benefits from material recycling and energy recovery beyond the system boundary. | ✓ |

## 5. Core enviromental impact indicators

The following life cycle parameter indicators have been calculated according to ISO 14040, ISO 14044, ISO 14025, and EN 15804+A2.

| | | Materials adquisition | | Manufacturing | Distribution and instalation | | End of Life | | | Benefits and loads | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Impact Category** | **Unit** | **A1** | **A2** | **A3** | **A4** | **A5** | **C2** | **C3** | **C4** | **D** | **Total** |
| GWP - total Carbon footprint | kg CO2e | 1,14E+01 | 1,03E+00 | 1,03E+00 | 1,09E+00 | 1,71E+00 | 1,06E-01 | 5,59E+00 | 7,64E-01 | -8,17E+00 | 2,27E+01 |
| GWP - fossil | kg CO2e | 1,25E+01 | 1,03E+00 | 2,36E+00 | 1,09E+00 | 2,53E-01 | 1,06E-01 | 3,88E+00 | 9,65E-02 | -8,09E+00 | 2,13E+01 |
| GWP - biogenic | kg CO2e | -1,44E+00 | 1,53E-04 | -1,37E+00 | 2,38E-04 | 1,46E+00 | 2,36E-05 | 1,71E+00 | 6,65E-01 | 2,61E-02 | 1,01E+00 |
| GWP - LULUC | kg CO2e | 3,38E-01 | 3,72E-04 | 4,14E-02 | 5,28E-04 | 2,69E-05 | 4,67E-05 | 1,07E-04 | 9,84E-06 | -9,65E-02 | 3,80E-01 |
| Ozone depletion pot. | kg CFC-11e | 2,96E-07 | 2,06E-08 | 6,12E-08 | 1,71E-08 | 5,00E-10 | 1,60E-09 | 1,40E-09 | 3,00E-10 | -1,09E-07 | 3,99E-07 |
| Acidification potential | mol H+e | 8,70E-02 | 2,15E-03 | 8,06E-03 | 9,77E-03 | 1,93E-04 | 3,56E-04 | 1,25E-03 | 9,42E-05 | -5,17E-02 | 1,09E-01 |
| EP - freshwater | kg Pe | 7,45E-03 | 6,99E-05 | 8,44E-04 | 7,49E-05 | 9,39E-06 | 8,17E-06 | 3,75E-05 | 3,62E-06 | -2,88E-03 | 8,51E-03 |
| EP - marine | kg Ne | 1,57E-02 | 5,17E-04 | 3,27E-03 | 2,44E-03 | 2,64E-04 | 1,17E-04 | 7,37E-04 | 1,02E-03 | -7,41E-03 | 2,41E-02 |
| EP - terrestrial | mol Ne | 1,24E-01 | 5,59E-03 | 2,28E-02 | 2,69E-02 | 6,65E-04 | 1,27E-03 | 5,40E-03 | 3,84E-04 | -7,68E-02 | 1,87E-01 |
| POCP ("smog") | kg NMVOCe | 4,71E-02 | 3,58E-03 | 8,63E-03 | 8,93E-03 | 2,34E-04 | 5,17E-04 | 1,39E-03 | 1,55E-04 | -3,12E-02 | 7,07E-02 |
| ADP - minerals & metals | kg Sbe | 2,84E-04 | 3,45E-06 | 1,39E-05 | 2,66E-06 | 2,79E-07 | 3,11E-07 | 2,25E-06 | 3,04E-08 | -3,00E-05 | 3,07E-04 |
| ADP - fossil resources | MJ | 1,91E+02 | 1,46E+01 | 3,95E+01 | 1,57E+01 | 4,07E-01 | 1,51E+00 | 1,24E+00 | 2,87E-01 | -1,17E+02 | 2,64E+02 |
| Water use | m3e depr. | 7,83E+00 | 7,26E-02 | 1,16E+00 | 7,07E-02 | 1,51E-02 | 7,33E-03 | 1,42E-01 | 2,41E-03 | -4,56E+00 | 9,31E+00 |

*GWP-total= Global Warming Potential total (Carbon Footprint); GWP – fossil = Global Warming Potential fossil; GWP – biogenic = Global Warming Potential biogenic; GWP – LULUC = Global Warming Potential, Land Use and Land Use Change; Ozone depletion pot.= Depletion potential of the stratospheric ozone layer; Acidification potential = Acidification potential, Accumulated Exceedance; EP-freshwater= Eutrophication aquatic freshwater; EP-marine = Eutrophication aquatic marine; EP-terrestrial = Eutrophication terrestrial; POCP ("smog")= Formation potential of tropospheric ozone; ADP-minerals & metals = Abiotic depletion potential (ADP-elements) for non fossil resources; ADP-fossil resources= Abiotic depletion potential (ADP-fossil fuels) for fossil resources; Water use= Water (user) deprivation potential, deprivation-weighted water consumption (WDP).*

## 6. Additional labels

### 6.1 VOCs and other hazardous substances

Andreu World's products have been tested under ANSI/BIFMA e3-2011 Furniture Sustainability Standard sections 7.6.1 Or 7.6.2, does not contain urea formaldehyde, heavy metals such as mercury, cadmium, lead, antimony, PFCs, PVC, and hazardous substances from American and European standards.

### 6.2 LEED V5 Contributions

| Category | Item | Contribution | |
|---|---|---|---|
| Materials and Resources | Optimized Building Products Possible 5 Points | Multi-attribute certifications: Cradle to Cradle: Bronze | 2 Points |
| | | Multi-attribute certifications: BIFMA e3/level | 1 Point |
| | | Multi-attribute certifications: FSC Certified | 2.5 Points |
| | | Multi-attribute certifications: Reused materials | 2 Points |
| | | Multi-attribute certifications: Recycled content | % |
| | | Multi-attribute certifications: Biobased – nonwood | % |
| | Low-emitting materials Possible 3 points | Andreu World/'s products use the ANSI/BIFMA method to meet the Low-Emitting Materials credit obtaining SCS Indoor Advantage™ Gold certificate | 1-3 Points |

### 6.3 WELL V2 Q1-Q2 2025

Nourishment N08 - Mindful Eating. Andreu World offers a variety of furniture products to outfit dedicated eating spaces. (2 points)
Movement V07 - Active Furnishings. Sit-stand workstations with electric height adjustable configurations available. (2 points) (Reverse and Solid)
Sound S04 - Reverberation Time. Available fabrics and upholstered items that contribute absorbing the reverberance in indoor spaces. (2 points) (In Out Office)
Sound S05 - Sound Reducing Surfaces. Available products and materials that absorb and/or block sound to support concentration and reduce reverberation.
Materials X01 - Material Restrictions. Restrictions met for asbestos, mercury, and lead. (required)
Materials X05 - Enhanced Material Restrictions. Restrictions met for halogenated flame retardants (HFR), per- and polyfluoroalkyl substances (PFAS), lead, cadmium, and mercury. (1 point)
Materials X06 - VOC Restrictions. Products certified Indoor Advantage™ Gold for indoor air quality and meet ANSI/BIFMA e3-2014 sections 7.6.1 and 7.6.2. (2 points)
Materials X07 - Materials Transparency. Andreu World products are Cradle-to-Cradle Certified™ and the ingredient disclosure is verified by a third party (2 points)
Materials X08 - Materials Optimization. Andreu World products meet the chemical thresholds in the Cradle to Cradle Basic Level Restricted Substances List, version 4. (2 points)
Mind M02 - Nature and Place. Contribution by selecting textiles and finishes with natural materials, patterns, and colors. (required)
Mind M07 - Restorative Spaces. Selection of products can either create or be incorporated into restorative spaces. (1 point)
Community Feature C13 - Accessibility and Universal Design. Andreu World offers products and upholstery options that include similar or complementing design elements, allowing project teams to easily create visually grouped zones of furniture to support wayfinding, or to support neurodiverse individuals. (2 points)