Life Cycle Assessment Verification Opinion

The Inventory of Life Cycle Assessment of
Office Chair
which is calculated by

706 Seating Group

Thomas Malthusweg 2, 1689 ZP Zwaag,
The Netherlands

Based on life cycle assessment verified in accordance
as meeting the requirements of

ISO 14025:2006

Basis of Assessment
Cradle-to-Grave

Authorized by

David Huang
Senior Director
Date: 21 October 2020
Version 1

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This opinion is not valid without the full verification scope, objectives, criteria and findings available on the opinion.

Product Name	Office Chair - 787Edition Nylon							
Verification Unit	per Office Chair							
Functional Unit	per Office Chair (during 15 years of use)							
Life Cycle Emissions								
Environmental Impact Indicator	Unit	Target Product Environmental Impact Indicator Emissions						Functional Unit Emissions
		Material	Manufacture	Distribution	Use	Disposal	Total	
Abiotic depletion	kg Sb eq	0.001	0.000	0.000	0.000	0.000	0.001	0.001
Abiotic depletion (fossil fuels)	MJ	1,627.300	4.194	65.471	0.000	0.093	1,697.058	1,697.058
Global warming (IPCC2013 GWP100a)	kg CO_2 eq	121.285	0.412	4.612	0.000	0.157	126.466	126.466
Eutrophication	kg PO_4^{3-} eq	0.124	0.001	0.011	0.000	0.000	0.136	0.136
Acidification (fate not incl.)	kg SO_2 eq	0.388	0.002	0.096	0.000	0.000	0.486	0.486
Water use	m^3	32.657	0.281	0.553	0.000	0.020	33.511	33.511
Photochemical oxidant formation	kg NMVOC	0.435	0.001	0.068	0.000	0.000	0.504	0.504

Product Name	Office Chair - 787 Edition Comfort Nylon							
Verification Unit	per Office Chair							
Functional Unit	per Office Chair (during 15 years of use)							
Life Cycle Emissions								
Environmental Impact Indicator	Unit	Target Product Environmental Impact Indicator Emissions						Functional Unit Emissions
		Material	Manufacture	Distribution	Use	Disposal	Total	
Abiotic depletion	kg Sb eq	0.001	0.000	0.000	0.000	0.000	0.001	0.001
Abiotic depletion (fossil fuels)	MJ	1,784.581	4.194	65.694	0.000	0.093	1,854.562	1,854.562
Global warming (IPCC2013 GWP100a)	kg CO_2 eq	128.406	0.412	4.626	0.000	0.157	133.601	133.601
Eutrophication	kg PO_4^{3-} eq	0.127	0.001	0.011	0.000	0.000	0.139	0.139
Acidification (fate not incl.)	kg SO_2 eq	0.420	0.002	0.096	0.000	0.000	0.518	0.518
Water use	m^3	33.676	0.281	0.555	0.000	0.020	34.532	34.532
Photochemical oxidant formation	kg NMVOC	0.459	0.001	0.068	0.000	0.000	0.528	0.528

Product Name	Office Chair - 787 NPR Comfort Nylon							
Verification Unit	per Office Chair							
Functional Unit	per Office Chair (during 15 years of use)							
Life Cycle Emissions								
Environmental Impact Indicator	Unit	Target Product Environmental Impact Indicator Emissions						Functional Unit Emissions
		Material	Manufacture	Distribution	Use	Disposal	Total	
Abiotic depletion	kg Sb eq	0.001	0.000	0.000	0.000	0.000	0.001	0.001
Abiotic depletion (fossil fuels)	MJ	2,053.652	4.193	76.837	0.000	0.094	2,134.776	2,134.776
Global warming (IPCC2013 GWP100a)	kg CO_2 eq	151.474	0.412	5.410	0.000	0.159	157.455	157.455
Eutrophication	kg PO_4^{3-} eq	0.144	0.001	0.013	0.000	0.000	0.158	0.158
Acidification (fate not incl.)	kg SO_2 eq	0.468	0.002	0.113	0.000	0.000	0.583	0.583
Water use	m^3	39.743	0.281	0.649	0.000	0.020	40.693	40.693
Photochemical oxidant formation	kg NMVOC	0.524	0.001	0.080	0.000	0.000	0.605	0.605

Product Name	Office Chair - 706+ Edition Nylon							
Verification Unit	per Office Chair							
Functional Unit	per Office Chair (during 15 years of use)							
Life Cycle Emissions								
Environmental Impact Indicator	Unit	Target Product Environmental Impact Indicator Emissions						Functional Unit Emissions
		Material	Manufacture	Distribution	Use	Disposal	Total	
Abiotic depletion	kg Sb eq	0.001	0.000	0.000	0.000	0.000	0.001	0.001
Abiotic depletion (fossil fuels)	MJ	1,777.314	4.194	60.862	0.000	0.093	1,842.463	1,842.463
Global warming (IPCC2013 GWP100a)	kg CO_2 eq	133.722	0.412	4.285	0.000	0.158	138.577	138.577
Eutrophication	kg PO_4^{3-} eq	0.130	0.001	0.011	0.000	0.000	0.142	0.142
Acidification (fate not incl.)	kg SO_2 eq	0.441	0.002	0.089	0.000	0.000	0.532	0.532
Water use	m^3	36.368	0.281	0.514	0.000	0.020	37.183	37.183
Photochemical oxidant formation	kg NMVOC	0.473	0.001	0.063	0.000	0.000	0.537	0.537

Product Name	Office Chair - 706+ Edition Comfort Nylon							
Verification Unit	per Office Chair							
Functional Unit	per Office Chair (during 15 years of use)							
Life Cycle Emissions								
Environmental Impact Indicator	Unit	Target Product Environmental Impact Indicator Emissions						Functional Unit Emissions
		Material	Manufacture	Distribution	Use	Disposal	Total	
Abiotic depletion	kg Sb eq	0.001	0.000	0.000	0.000	0.000	0.001	0.001
Abiotic depletion (fossil fuels)	MJ	1,881.659	4.194	64.394	0.000	0.093	1,950.34	1,950.34
Global warming (IPCC2013 GWP100a)	kg CO_2 eq	137.104	0.412	4.534	0.000	0.158	142.208	142.208
Eutrophication	kg PO_4^{3-} eq	0.130	0.001	0.011	0.000	0.000	0.142	0.142
Acidification (fate not incl.)	kg SO_2 eq	0.462	0.002	0.094	0.000	0.000	0.558	0.558
Water use	m^3	36.310	0.281	0.544	0.000	0.020	37.155	37.155
Photochemical oxidant formation	kg NMVOC	0.486	0.001	0.067	0.000	0.000	0.554	0.554

The contents of environmental impact indicators verification covers the following:

- Verified Products:
  - Office Chair - 787Edition Nylon
  - Office Chair - 787 Edition Comfort Nylon
  - Office Chair - 787 NPR Comfort Nylon
  - Office Chair - 706+ Edition Nylon
  - Office Chair - 706+ Edition Comfort Nylon
- Environmental impact indicators verification information for the following production period was verified：01 January 2019 to 31 December 2019.
- Product Category Rule：SEATS, UN CPC 3811, VERSION 3.0, 17 April 2020, EPD.
- Life cycle assessment tool and index：
  - Life cycle emissions are calculated by Excel and Simapro 9.0.0.41.
  - Data resources：The data collection is from Ecoinvent 3、Agri-footprint、USLCI.

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