

PRODUCT CARBON FOOTPRINT

IN ACCORDANCE WITH ISO 14067

WORK DS BENCH - Fixed Top - 1600x1600
Task Systems Ltd.



GENERAL INFORMATION

MANUFACTURER

Manufacturer	Task Systems Ltd.
Address	Unit 3 & 4, Block C, Gemini Business Park, Hornet Way, Beckton, London, E6 7FF, UK
Contact details	marketing@tasksystems.co.uk
Website	https://www.tasksystems.co.uk/

STANDARDS, SCOPE AND VERIFICATION

Reference standard	ISO 14067
PCR	n/a
Sector	Manufactured product
Scope	Cradle to Gate with modules A4-A5, plus End of Life
Author	Sam McGarrick, Blue Marble

The manufacturer has the sole ownership, liability, and responsibility for the carbon footprint.

PRODUCT

Product name	WORK DS BENCH - Fixed Top - 1600x1600
Additional labels	-
Product reference	-
Place of production	London, United Kingdom
Period for data	01/01/2022 - 01/01/2023
Averaging	-
Variation in GWP-fossil for A1-A3	-%

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 Unit
Declared unit mass	53 kg
GWP-fossil, A1-A3 (kgCO ₂ e)	1.01E2
GWP-total, A1-A3 (kgCO ₂ e)	6.65E1
Secondary material, inputs (%)	46.3
Secondary material, outputs (%)	72.0
Total energy use, A1-A3 (kWh)	412.0
Total water use, A1-A3 (m ³ e)	8.19E-1



PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Task Systems are a UK based contract furniture manufacturer and distributor, established in 1980. Task Systems is a business that promotes flexibility within the solutions offered and a level of service and support that meets and exceeds client expectations. Their personal approach enables them to get to know their clients and their individual project needs and to proactively provide bespoke solutions tailored to their unique requirements.

PRODUCT DESCRIPTION

WORK is a fully integrated workplace system offering an extensive and flexible collection of options. It serves not only as benching, but is equally as an attractive desk range or as a fluid collection of tables. WORK structure begins with a styled angled leg. These support a steel parallel beam structure which forms the solid base for the top panels and screening options. To finish off the collection we offer a superb executive desk which could be used with very high quality hand finished veneer and fenix tops.

Further information can be found at <https://www.tasksystems.co.uk/>.

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass- %	Material origin
Metals	64	EU
Minerals	0	n/a
Fossil materials	1	EU
Bio-based materials	35	EU

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	7.7
Biogenic carbon content in packaging, kg C	1.8

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 Unit
Mass per declared unit	53 kg
Functional unit	-
Reference service life	-



PRODUCT LIFE-CYCLE

SYSTEM BOUNDARY

This carbon footprint covers the life-cycle modules listed in the following table.

Product stage			Assembly stage		Use stage								End of life stage				Beyond the system boundaries
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7		C1	C2	C3	C4	D
x	x	x	x	x	MND	MND	MND	MND	MND	MND	MND		x	x	x	x	x
Raw materials	Transport	Manufacturing	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use		Deconstr./demol.	Transport	Waste processing	Disposal	Reuse
																	Recovery
																	Recycling

Modules not declared = MND. Modules not relevant = MNR.

MANUFACTURING AND PACKAGING (A1-A3)

The environmental impacts considered for the product stage cover the manufacturing of raw materials used in the production as well as packaging materials and other ancillary materials. Also, fuels used by machines, and handling of waste formed in the production processes at the manufacturing facilities are included in this stage. The study also considers the material losses occurring during the manufacturing processes as well as losses during electricity transmission.

The product comprises a number of sub-component parts from two main suppliers. The frame is provided by one supplier, the worktop from another. Task Systems have provided a full breakdown of product components including their relative weight (mass) and timings for any processing (such as laser cutting). There is 25% recycled steel content in the frame (including both pre-and post-consumer content). The product



is packaged using cardboard and polystyrene sheets. The worktop is comprised of a MFC panel with PVC edging. Drilling of installation holes occurs through use of a pillar drill.

TRANSPORT AND INSTALLATION (A4-A5)

Transportation impacts occurred from final products delivery to construction site (A4) cover fuel direct exhaust emissions, environmental impacts of fuel production, as well as related infrastructure emissions.

Task Systems provide the majority of their products to client sites within central London (approximately 75%). Therefore, an address at central London was selected to represent typical transportation distances between the Task Systems warehouse and client site. Installation waste is considered in module A5, packaging plastic is considered to go to landfill to the closest (50km) waste treatment facility. Cardboard packaging is recycled.

PRODUCT USE AND MAINTENANCE (B1-B7)

This carbon footprint does not cover the use phase.

Air, soil, and water impacts during the use phase have not been studied.

PRODUCT END OF LIFE (C1-C4, D)

C1: Energy/resources consumed for de-construction/demolition of product is/are assumed negligible. As the product is dismantled by hand.

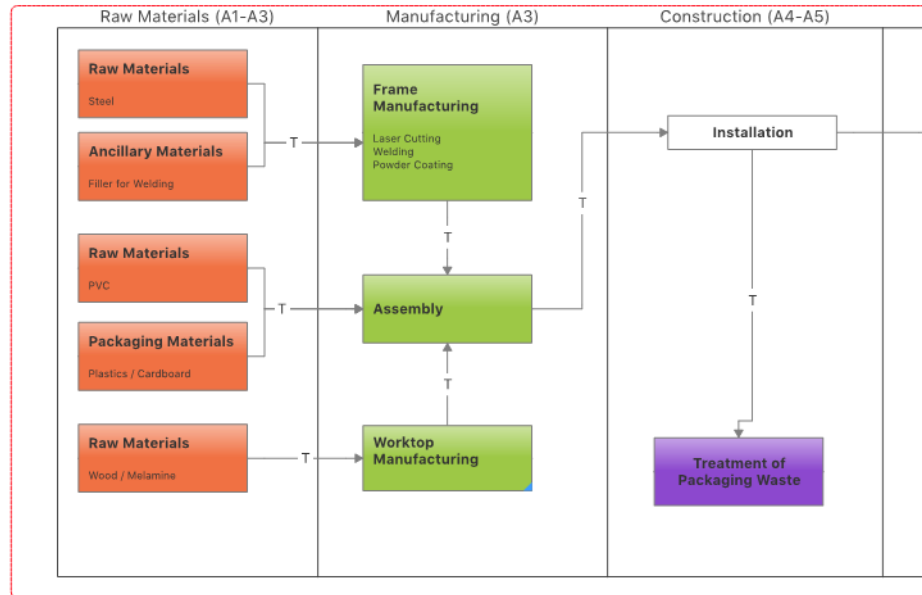
C2: Product is removed in one part and transported together with other furniture waste to the closest waste treatment facility. 50km is considered to be distance - The figure is based on the average distance and the estimate of the dispersion in the distances of the sorting points.



C3: Worktop is considered to be 50% recycled and 50% incinerated based on current scenario described in Eurostat data (<https://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do>). PVC edging is landfilled with no benefits. Steel waste is considered to be recycled at a rate of 85%. 15% of steel waste is considered to be landfilled. The used efficiency of the CHP plant in the calculation was approximately 73% as a whole, of which the efficiency for electricity is 11% and for heat production 62%. Source: (Eriksson, O & Finnveden, G. 2017).

D: Benefits and loads are accounted for all materials where applicable. Recycling of wood and metals (steel) waste is modelled with accounting the Loads due to recycling process and benefits related to the avoided products of corresponding raw materials. In the similar way - incineration loads are due to incineration process and benefits are calculated as produced electricity and heat - using the heating values of corresponding materials. The used efficiency of the CHP plant in the calculation was approximately 73% as a whole, of which the efficiency for electricity is 11% and for heat production 62%. Source: (Eriksson, O & Finnveden, G. 2017).

MANUFACTURING PROCESS





LIFE-CYCLE ASSESSMENT

CUT-OFF CRITERIA

The study does not exclude any modules or processes which are stated mandatory in the reference standard and the applied PCR. The study does not exclude any hazardous materials or substances. The study includes all major raw material and energy consumption. All inputs and outputs of the unit processes, for which data is available for, are included in the calculation. There is no neglected unit process more than 1% of total mass or energy flows. The module specific total neglected input and output flows also do not exceed 5% of energy usage or mass.

ALLOCATION, ESTIMATES AND ASSUMPTIONS

Allocation is required if some material, energy, and waste data cannot be measured separately for the product under investigation. All allocations are done as per the reference standards and the applied PCR. In this study, allocation has been done in the following ways:

Data type	Allocation
Raw materials	No allocation
Packaging materials	No allocation
Ancillary materials	No allocation
Manufacturing energy and waste	No allocation

AVERAGES AND VARIABILITY

Type of average	-
Averaging method	-
Variation in GWP-fossil for A1-A3	-%

This carbon footprint is product and factory specific and does not contain average calculations.

LCA SOFTWARE AND BIBLIOGRAPHY

The LCA and carbon footprint have been prepared according to the reference standards and ISO 14040/14044. Ecoinvent v3.8 database was used as sources of environmental data.



ENVIRONMENTAL IMPACT DATA

CORE ENVIRONMENTAL IMPACT INDICATORS

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP – total ¹⁾	kg CO ₂ e	5.79E1	4.81E0	3.82E0	6.65E1	1.71E-1	6.49E0	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	0E0	0E0	-1.95E1
GWP – fossil	kg CO ₂ e	8.6E1	4.81E0	1.03E1	1.01E2	1.73E-1	0E0	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	0E0	0E0	-3.24E1
GWP – biogenic	kg CO ₂ e	-2.82E1	1.84E-3	-6.49E0	-3.47E1	6.71E-5	6.49E0	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	1.41E1	1.41E1	1.29E1
GWP – LULUC	kg CO ₂ e	7.04E-2	1.82E-3	3.2E-2	1.04E-1	7.23E-5	0E0	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	0E0	0E0	-1.2E-3

1) GWP = Global Warming Potential.