

MD 21.700

SAUTER Declaration on materials and the environment

Product



	Type	**TUC**	
	Designation	**Universal thermostat**	
	Product range	**2-point controllers / thermostats**	
	Product group of eco-balance	**Controller**	
Manufacturer	Fr. Sauter AG Im Surinam 55, CH-4016 Basel		
Management system certified according to		**Since**	**With**
	ISO 9001	**10 Aug. 1993**	**SQS**
	ISO 9001:2000	**10 Aug. 2002**	**SQS**
	ISO 14001:2004	**10 Aug. 2005**	**SQS**
	OHSAS 18001:1999	**10 Aug. 2005**	**SQS**
Environmentally-compatible product design	Basis	Management system Fr. Sauter AG	
	Process	Business process • Product innovation • Ecological accounting	

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Product description	CE conformity	
	Function, operation, maintenance, servicing	PDS 21.700
Environmental risk	Fire protection according to	EN 60695-2-11, EN 60695-10-2
	Fire load [1]	31.1 – 32.7 MJ
	Hazardous substances [2]	Conforming to RoHS 2011/65/EU
	Banned substances (see link below)	Conforming to REACH 1907/2006/EC
	Parts containing halogen (causingcorrosive smoke)	None
	Liquids polluting the aquatic environment	None
	Explosive substances	None
Packaging [3]	Cardboard 133x88x76 mm	28.0 g

Materials

	Total weight of product [4]	289.5 – 327.8 g	Material Safety Data Sheet (MSDS)	EU waste code[5]
Plastic				
ABS		38.0 – 38.66 g	Yes	20 01 39
NBR		0.7 g	Yes	20 01 39
PA6		62.7 g	Yes	20 01 39
PC		21.2 g	Yes	20 01 39
PMMA		4.6 g	Yes	20 01 39
POM		0 – 0.92 g	Yes	20 01 39
TPE		1.2 g	Yes	20 01 39
Metal				
Steel, galvanised		7.6 g	Not required	20 01 40
Stainless steel		70.5 (TUC108F001)	Not required	20 01 40
Brass, all alloys		70.5 – 105.8 g	Not required	20 01 40
Printed circuit board				
Assembled PCB, lead-free solder		0 g	Not required	20 01 36
Various				
Cooling oil “BAYSILONE-OIL KT 5”		1.0 – 1.5 cm^3	Yes	13 03 10
Composites		83 g		

[1] See **Remarks** on last page
[2] Only applies to electrical devices
[3] Directive 94/62/EC and follow-on document, ruling 97/129/EC
[4] See **Remarks** on last page
[5] Directive 75/442/EEC and follow-on document, ruling 2001/118/EC

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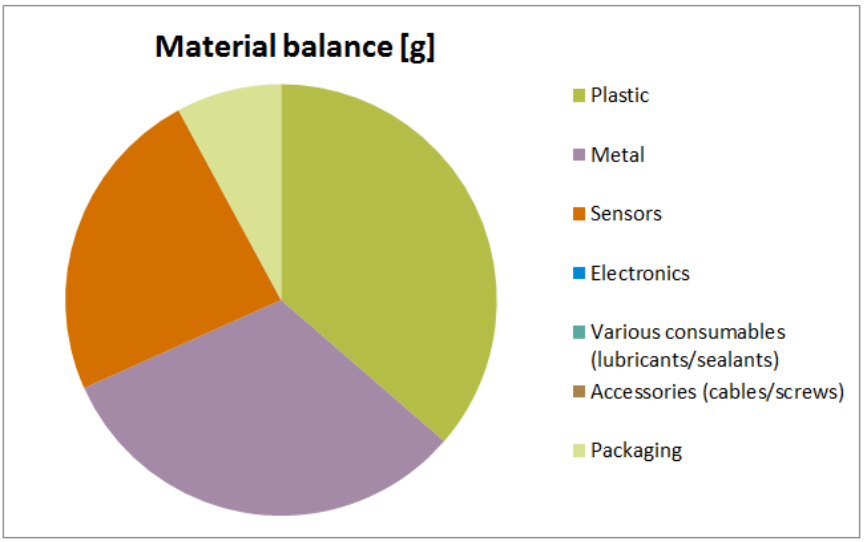
Note

The following materials balance and the calculation of the environmental impact relate to type TUC407F002.

Materials balance



Energy requirement in the utilisation phase

Power requirement for component

Minimum power consumption	0 W
Average power consumption	0 W
Typical energy consumption per year	0 kWh

The energy requirement evaluation was performed for a typical utilisation scenario. The European electricity mix from ecoinvent 2.2 was used to evaluate the power consumption in the utilisation phase.

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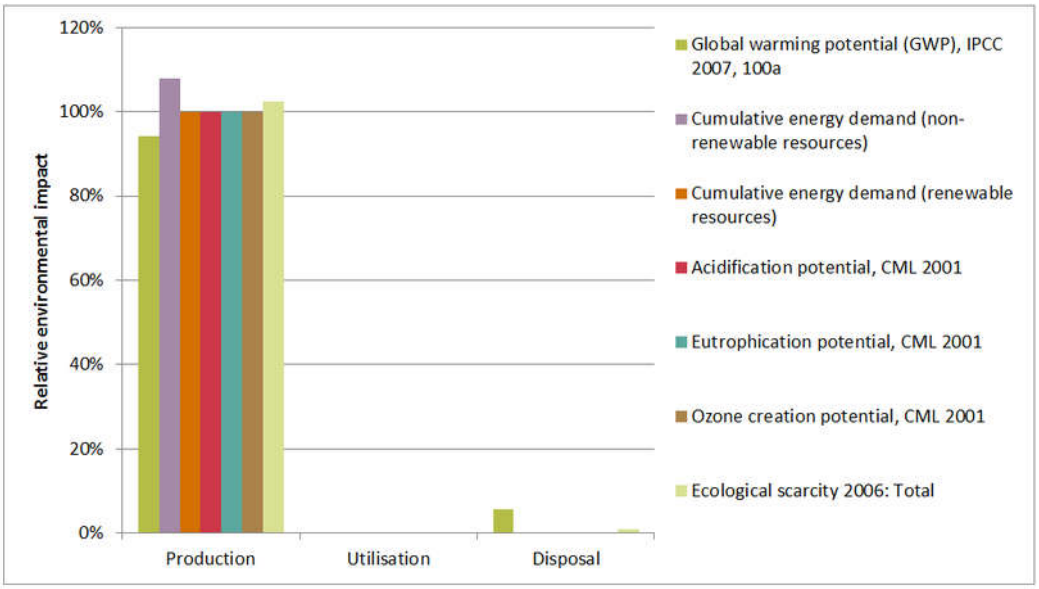
Calculation of the environmental impact

Evaluation over the entire life stage of 8 years in a typical utilisation scenario. The results shown are based on a method of ecological scarcity that combines various environmental effects into an "environmental impact points" key figure. The method is based on Switzerland's environmental targets and evaluates the individual effects depending on the "Distance to Target".

Indicator	Unit	Production	Utilisation	Disposal	Total
Global warming potential (GWP), IPCC 2007, 100a	kg CO2 eq.	2.3	-	0.1	2.4
Cumulative energy demand (non-renewable resources)	MJ eq.	43	-	0.1	40
Cumulative energy demand (renewable resources)	MJ eq.	5.5	-	0.00	6
Acidification potential, CML 2001	kg SO2 eq.	7.17E-02	0.00E+00	4.62E-05	7.17E-02
Eutrophication potential, CML 2001	kg PO4-- eq.	3.11E-02	0.00E+00	4.04E-05	3.12E-02
Ozone creation potential, CML 2001	kg C2H4 eq.	2.89E-03	0.00E+00	1.48E-06	2.90E-03
Ecological scarcity 2006: Total	UBP	12'300	-	110	12'000



The relationship of the contributions made by the utilisation in comparison to those made by the reduction and disposal depends on the intensity of the utilisation (utilisation scenario).

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Disposal	**Product:** The device must be disposed of as waste from electrical and electronic equipment (electrical/electronic scrap) and must not be disposed of as household waste. This applies in particular to the assembled PCB. Special treatment for special components may be compulsory by law or may make ecological sense. **Packaging:** Recyclable The local and currently valid laws (WEEE2012/19/EU) must be observed. **Special information:** None
Remarks	**(1) Depending on the fire load for the type:**

TUC101F003	3.9 MJ
TUC102F001	3.9 MJ
TUC105F001	3.9 MJ
TUC106F001	3.9 MJ
TUC107F001	3.9 MJ
TUC108F001	3.9 MJ
TUC207F003	3.9 MJ
TUC303F001	4.0 MJ
TUC307F001	4.0 MJ
TUC407F001	4.0 MJ
TUC407F002	4.0 MJ

(2) Depending on the weight of the type:

TUC101F003	301.52 g
TUC102F001	289.52 g
TUC105F001	289.52 g
TUC106F001	289.52 g
TUC107F001	289.52 g
TUC108F001	289.52 g
TUC207F003	301.52 g
TUC303F001	292.56 g
TUC307F001	292.56 g
TUC407F001	292.56 g
TUC407F002	327.81 g

How the environment benefits	With these products we make a significant contribution to energy savings in buildings and to reducing global warming. In the Green Building area, our products ensure that customer requirements are fulfilled optimally and that there is cost efficiency over the entire building life-cycle.

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Extent of applicability	This declaration is an environmental declaration based on ISO 14025 and describes the environmental impact of the product over its entire life stage. The declaration is made in a compact form without an external check or registration. The data gathered with existing data inventories for production processes has been evaluated from the ecoinvent 2.2 European database. For the determination of the energy requirement during the utilisation phase of the product, standard HVAC applications and average climatic conditions in Switzerland were assumed, based on the ecological accounting for the corresponding product group.

Disclaimer: This declaration is for information purposes only.

Deviations from the information it contains can occur without notification. Fr. Sauter AG explicitly rules out any liability for any consequences that may result due to the above information.

Your local SAUTER representative will provide further information on environmental aspects, and specifically on disposal.

References

Ecoinvent 2010 ecoinvent data v2.2, Swiss Centre for Life Cycle Inventories, Dübendorf

FOEN 2008 eco-balances: method of ecological scarcity – eco-factors 2006, FOEN

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