MD 55.102

SAUTER Declaration on materials and the environment

Product

	Type	**AXT301F100, AXT301F102** **AXT301F110, AXT301F112** **AXT301F210, AXT301F212** **AXT301HF110, AXT301HF112** **AXT311F110, AXT311F112**
	Designation	**Actuator for unit valves**
	Product range	**Unit valves and actuators**
	Product group of eco-balance	**Positioning actuators**
Manufacturer	Fr. Sauter AG Im Surinam 55, CH-4058 Basel	

Management system certified according to	**Since**	**With**
ISO 9001:2015	**10 Oct. 2018**	**SQS**
ISO 14001:2015	**10 Oct. 2018**	**SQS**
ISO 45001:2018	**10 Oct. 2018**	**SQS**

Environmentally-compatible product design	Basis	Management system Fr. Sauter AG
	Process	Business process • Product innovation • Ecological accounting

D100519936 (01. 01) 04.10.2023

Product description	CE conformity, function, operation, maintenance, servicing	**See PDS 55.103**
Environmental risk	Fire protection according to	**EN 60695-2-11, EN 60695-10-2**
	Fire load	**1.1 MJ – 1.4 MJ**
	Hazardous substances [1] according to	**RoHS 2011/65/EU & 2015/863/EU compliant. Product category 9.**
	Hazardous substances [2] according to	**REACH 1907/2006/EC compliant.**
	Parts containing halogen (causing corrosive smoke)	**Cable**
	Liquids polluting the aquatic environment	**None**
	Explosive substances	**None**
	Transport hazardous goods class	**None**

Materials

	Total weight of product [3]	**89.7 g … 178.01 g**	Material Safety Data Sheet (MSDS)	EU waste code [4]
Plastic				
PA6		**19.75 g … 34.67 g**	Not required	20 01 39
PUR		**1.31 g**	Not required	20 01 39
POM		**0.8 g**	Not required	20 01 39
PC+ABS		**18.1 g … 25.22 g**	Not required	20 01 39
Softsilikon		**0.18 g**	Not required	20 01 39
Metal				
Stainless stehl		**12.99 g … 16.37 g**	Not required	20 01 40
Brass of different alloys		**0.16 g**	Not required	20 01 40
Various				
Expansion element (CuZn39 Pb3, wax)		**12.99 g**	Not required	12 01 12
circuit board		**0.9 g**	Not required	20 01 36
Special components				
PVC cable		**31.61 g**	Not required	20 01 36
PTC 230V		**0.9 g**	Not required	20 01 36
Packaging [5]				
Corrugated board PAP 20		**18 g**	Not required	20 01 01

[1] Only applies to electrical devices
[2] SVHC substances >0.1%w/w: see **Hazardous ingredients**
[3] See **Remarks** on last page
[4] Directive 75/442/EEC and follow-on document, ruling 2001/118/EC
[5] Directive 94/62/EC, 2004/12/EC, 2005/20/EC, 2018/852/EC

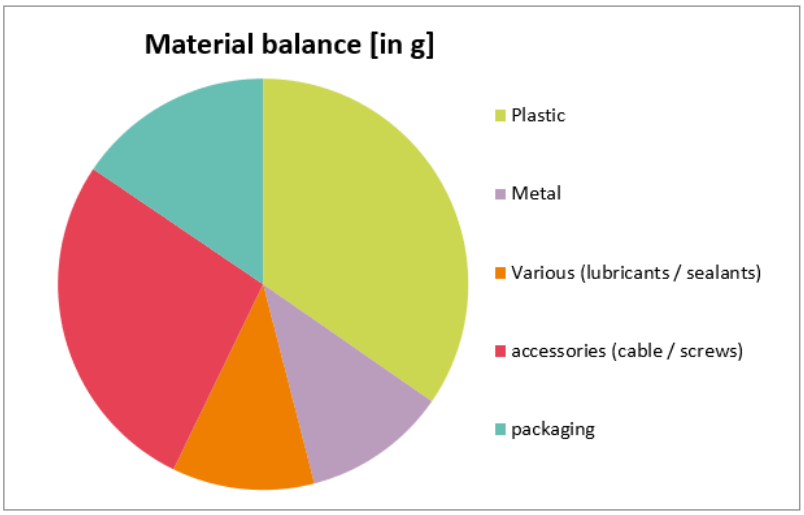
Hazardous ingredients

SVHC ingredient		Name of the ingredient	Effective concentration per article, %w/w
CAS number	EN number		
7439-92-1	231-100-4	Lead	3.5

SCIP number will be communicated upon justified request.
Link to ECHA candidate list

The diagram of the material balance is made also the general type AXT301F110 - (116,8g)

Materials balance



Material balance	g
Plastic	40,1
Metal	13,2
Elektronics	0,9
Motor	0,0
Various (lubricants / sealants)	13,0
accessories (cable / screws)	31,6
packaging	18,0
	116,8

Energy requirement in the utilisation phase

Power requirement for component

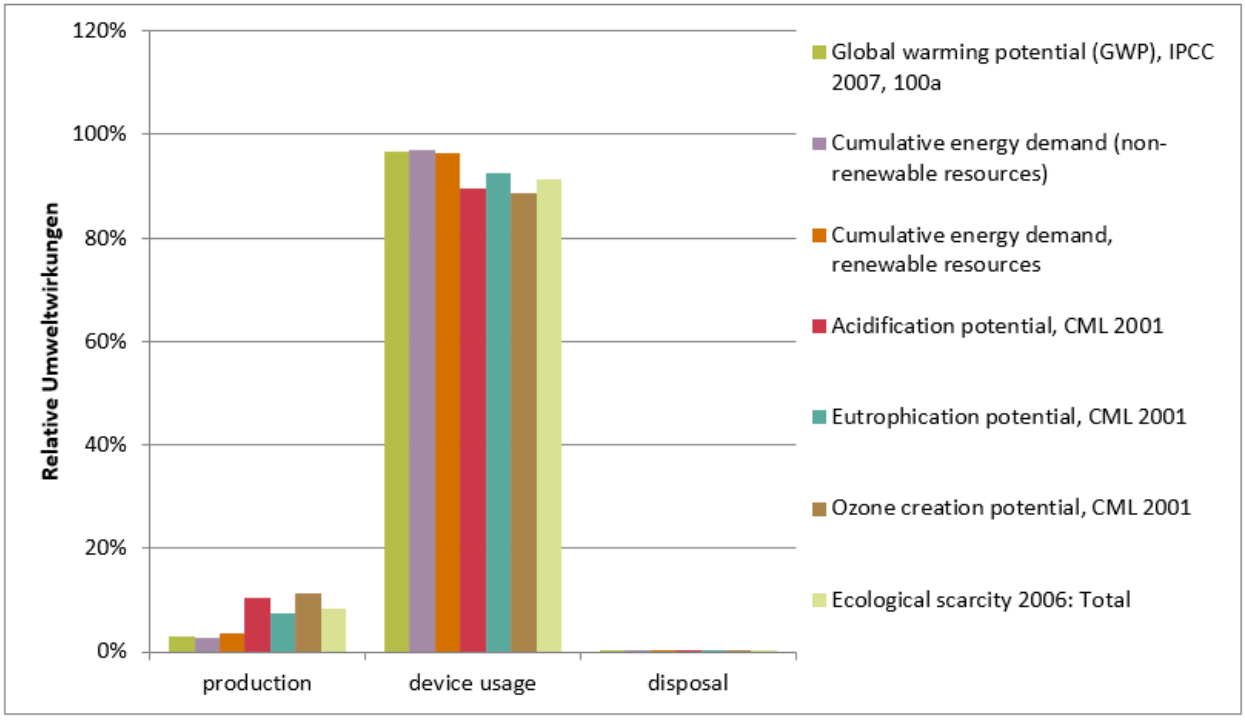
Average power consumption	1	W
Typical energy consumption per year	8.76	kWh

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.

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”.

Indikator	unit	production	device usage	disposal	Total
Global warming potential (GWP), IPCC 2007, 100a	kg CO2 eq.	1,2	39,1	0,1	40,4
Cumulative energy demand (non-renewable resources)	MJ eq.	23	793	0,1	816
Cumulative energy demand, renewable resources	MJ eq.	2,3	60,1	0,01	62,4
Acidification potential, CML 2001	kg SO2 eq.	1,89E-02	1,61E-01	3,05E-05	1,80E-01
Eutrophication potential, CML 2001	kg PO4-- eq.	1,01E-02	1,28E-01	2,69E-05	1,38E-01
Ozone creation potential, CML 2001	kg C2H4 eq.	8,20E-04	6,49E-03	1,20E-06	7,31E-03
Ecological scarcity 2006: Total	UBP	3.670	39.900	40	43.700



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).

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. **WEEE** (Waste Electrical and Electronic Equipment) The local and currently valid laws (WEEE2012/19/EU) must be observed. **Packaging:** Recyclable. Any packaging disposal fees are the responsibility of the importer. **Special notes on hazards:** Residual electrical charge possible in capacitive components.
Remarks	(1) **Weight depending on type, including packing:** **AXT301F100, AXT301F102** 89,7 g (Delivery without cable) **AXT301F110, AXT301F112** 116,8 g **AXT301F210, AXT301F212** 116,8 g **AXT301HF110, AXT301HF112** 178,01 g **AXT311F110, AXT311F112** 126,11 g
Note	Silicone content: 0.015g of silicone grease is needed in the thermal element
How the environment benefits	With these products, we make a significant contribution to energy savings in buildings and to reducing climate change. Its resource-saving compact design and easy single-sort disassembly result in optimal sustainability with a life expectancy of 8 years. The eco-balance becomes even more optimal, with the use of energy from renewable sources.
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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