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Material Declaration of Conformity (M-DoC)

- **European DIRECTIVE 2011/65/EU (RoHS II)**
- **Chinese MIIT Order 32 (China-RoHS 2)**
- **European REACH REGULATION (EC)1907/2006**
- **European POP Regulation (EU) 2019/1021**
- **PULS Position on the Demand for "Halogen-Free Products"**
- **Free of paint wetting impairment substances (LABS) in accordance to VDMA 24364**

PULS Sales-number / Model Designation
PIC120.241D

Table 1

European DIRECTIVE 2011/65/EU (RoHS II)

PULS Standard Units listed in table 1 meet regulations regarding the restriction in the use of certain hazardous substances in electrical and electronic equipment according the DIRECTIVE 2011/65/EU (RoHS II) amended by DIRECTIVE (EU) 2017/2102.

The RoHS II conformity of these units is valid since before June 2011. For PULS Standard Units launched after June 2011, full compliance is already in place from the market launch date.

PULS Standard Units listed in table 1 meet the restricted substances referred to in Article 4 (1) and maximum concentration values by weight of homogeneous materials according to Annex II.

Annex II to the Directive 2011/65/EU was amended by DIRECTIVE (EU) 2015/863. PULS confirms compliance with these additional substance restrictions.

Applications exempted from the restriction in Article 4(1) according to Annex III are:

07a, 07c-I

Note: The technical documentation as proof of compliance with the applicable RoHS DIRECTIVE 2011/65/EU is given in accordance with EN IEC 63000:2018 *(Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances)*.

Chinese MIIT Order 32 (China-RoHS 2)

PULS Standard Units listed in table 1 meet the Measures for Restriction of the Use of Hazardous Substances in Electrical & Electronic Products Order No. 32 (China-RoHS II) of the Chinese Ministry of Industry and Information Technology (MIIT).

Hazardous Substance **Control Table in compliance with Chinese SJ/T11364-2014** for units as listed in table 1.

部件名称 Part Name	有毒有害物质或元素 Toxic or hazardous Substances and Elements					
	铅 Lead (Pb)	汞 Mercury (Hg)	镉 Cadmium (Cd)	六价铬 Hexavalent Chromium (Cr (VI))	多溴联苯 Polybrominated biphenyls (PBB)	多溴二苯醚 Polybrominated diphenyl ethers (PBDE)
Printed Circuit Boards Assemblies	X	O	O	O	O	O
Housing	O	O	O	O	O	O
Terminals	O	O	O	O	O	O
Labels	O	O	O	O	O	O
Slider	O	O	O	O	O	O
O: 表示该有毒有害物质在该部件所有均质材料中的含量均在GB/T 26572规定的限量要求以下 O: Indicates the toxic or hazardous substance contained in all of the homogeneous materials for this part is within the limit requirement in GB/T 26572.						
X: 表示该有毒有害物质至少在该部件的某一均质材料中的含量超出GB/T 26572规定的限量要求。 X: Indicates the toxic or hazardous substance contained in at least one of the homogeneous materials used for this part is outside the limit requirement in GB/T 26572						
环保期限（EFUP）的产品及其部件是每个列出的符号，除非另有标明。使用期限只适用于产品在产品手册中规定的条件下工作 The Environmentally Friendly Period (EFUP) for the product and its parts are per the symbol listed, unless otherwise marked. The Period of use is valid only when the product is operated within the conditions defined in the product manual.						

Table 3

The EFUP of the units listed in table 1 is 25 years.
The units are marked with following EFUP symbol:

European REACH Regulation (EC) 1907/2006

As a manufacturer of electronic power supplies, PULS GmbH is a "downstream user" with regards to the Regulation for the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH). Therefore, PULS is providing information only on non-chemical articles (products). In principle, PULS GmbH is not subject to any obligation to register or to compile material safety data sheets.

PULS hereby confirms that its electronic power supplies comply with the legal obligations regarding Article 33 and the restrictions outlined in Annex XVII of the European REACH Regulation 1907/2006 which came into force on 01.06.2007.

PULS and its suppliers will continuously review the actual ECHA "Candidate List" for additions and updates and act accordingly in compliance with REACH regulations. The actual candidate list is provided on the European Chemicals Agency website at:

https://echa.europa.eu/candidate-list-table

The information requirement of REACH Article 33 is met by considering the ECJ-Judgment (Case C-106/14) for calculating the SVHC content in articles.

The SVHC weight calculation is done in recommendation according to the - ECHA Guidance on requirements for substances in articles.

Within PULS supply chain the company received the following REACH Article 33 information that its Standard Units (listed in table 1) contain component(s) with the following SVHC (Article 59) listed substances >0.1% by weight.

Article Group	SVHC listed substances > 0.1 % by weight	EC #	CAS #
Electronic components	Lead	231-100-4	7439-92-1
From PULS supply chain there is currently no information that material safety data sheets must be made available for units listed in table 1.			

Table 2

PULS will replace SVHC listed substances with alternative solutions as far as is technically and economically feasible.

Note: The technical documentation as proof of compliance with the applicable REACH Regulation 1907/2006 is given in accordance with EN IEC 63000:2018 (*Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances*).

European POP Regulation (EU) 2019/1021

PULS confirms the Regulation (EU) 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants (POP).

For PULS Standard Units listed in table 1 there is to-date no evidence within our supply chain that:

- our products contain articles with prohibited substances from Annex I of POP regulation.
- there is any use of exemption from control measures acc. Article 4 (see additionally Annex I) of POP regulation.

Note: The technical documentation as proof of compliance with the applicable POP Regulation (EU) 2019/1021 is given in accordance with EN IEC 63000:2018 *(Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances)*.

Demand for "Halogen-Free Products”

Concerning the requirement for halogen-free design of products, PULS GmbH aligns with the ZVEI Positioning Paper detailing the Demand for "Halogen-Free Products" in the Electrical and Electronics Industry (Edition: Oct. 2010).

Based on the above-mentioned paper, PULS issued the following “Halogen-free” affirmations regarding materials contained in PULS Standard Units listed in table 1:

- Plastic or chemical materials (e.g. housing components, sliders, connectors, terminals, glue, heat conductive paste, etc.) do not contain halogens.
- All other material shall contain halogens according to IEC 61249-2-21, with max. 1500 ppm halogens in total (max. 900 ppm bromine; max. 900 ppm chlorine) as far as is possible within the state of the art and/or economic viability.

**ZVEI = German Electrical and Electronic Manufacturers' Association*

Free of paint wetting impairment substances (LABS) in accordance to VDMA 24364

PULS Standard Units listed in table 1 are free of paint wetting impairment substances (LABS).
The investigation for substances that impair paint wetting was carried out in accordance with VDMA 24634: 2018-05. The results are shown in the table below:

Test Report	Teet class	lacquer type	Designation of the LABS conformity
LAB-20-841	C1	solvent + water based (L/W)	VDMA24364-C1-L/W

Name and address of the responsible manufacturer

PULS GmbH
Elektrastraße 6
81925 Munich
Germany

Friedrich Haunschild

i. V. Mr. Friedrich Haunschild, Expert Material Declaration
name, function, signature*

**The M-DoC is valid with electronical signature.*