

31. ES 31: Service life (consumers); cobalt being encapsulated in the internal part of the product

31.1. Title section

Article category: Machinery, mechanical appliances, electrical/electronic articles (AC 2)

Environment	
1: Service life of articles containing cobalt encapsulated in the internal part of the product	ERC 10a, ERC 11a
Consumer	
2: Handling of electronic articles.	AC 2
Exposure scenario of the uses leading to the inclusion of the substance into the article	
ES 27: Use at industrial sites; Semiconductors; Various sectors; Industrial use of cobalt in the production of varistors and magnets (calcination/sintering processes)	

31.2. Conditions of use affecting exposure

31.2.1. Control of environmental exposure: Service life of articles containing cobalt encapsulated in the internal part of the product (ERC 10a, ERC 11a)

Conditions and measures related to external treatment of waste (including article waste)
Dispose of waste product or used containers according to local regulations.
Other conditions affecting environmental exposure
Municipal sewage treatment plant is assumed.

31.2.2. Control of consumer exposure: Handling of electronic articles. (AC 2)

Product (article) characteristics
Oral exposure is considered to be not relevant.
Physical form covered in this ES: encapsulated in the internal part
Inhalation exposure is considered to be not relevant.
Assumes no dermal contact

31.3. Exposure estimation and reference to its source

31.3.1. Environmental release and exposure: Service life of articles containing cobalt encapsulated in the internal part of the product (ERC 10a)

Release route	Release rate	Release estimation method
Water	0 kg/day	Estimated release factor
Air	0 kg/day	Estimated release factor
Soil	0 kg/day	Estimated release factor

31.3.2. Consumer exposure: Handling of electronic articles. (AC 2)

Route of exposure and type of effects	Exposure estimate	RCR
Inhalation, local, long term	0 µg/m ³ (Qualitative assessment)	< 0.01
Oral, systemic, long term	0 µg/kg bw/day (Qualitative assessment)	< 0.01

31.4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Guidance: none