

11. ES 11: Service life (worker at industrial site); Welding in industrial settings

11.1. Title section

Article category: Metal articles (AC 7)

Environment	
1: Welding in industrial settings	ERC 12a
Worker	
2: Welding in industrial settings	PROC 25
Exposure scenario of the uses leading to the inclusion of the substance into the article	
ES 7: Use at industrial sites; Various products; Various sectors; Production and industrial use of cobalt containing alloys, steels and tools	

11.2. Conditions of use affecting exposure

11.2.1. Control of environmental exposure: Welding in industrial settings (ERC 12a)

Amount used, frequency and duration of use (or from service life)
Daily amount per site <= 50 tonnes/day
Annual amount per site <= 5E3 tonnes/year
Conditions and measures related to biological sewage treatment plant
Municipal sewage treatment plant is assumed.
Assumed domestic sewage treatment plant flow >= 2E3 m3/day
Conditions and measures related to external treatment of waste (including article waste)
Dispose of waste product or used containers according to local regulations.

11.2.2. Control of worker exposure: Welding in industrial settings (PROC 25)

Product (article) characteristics
Maximum emission potential covered in this ES: High (temperature based).
Limit the concentration of the substance in mixture to <= 25 %.
Physical form covered in this ES: Molten.
Physical form of product; Gaseous
Amount used (or contained in articles), frequency and duration of use/exposure
Duration of exposure: Not restricted.
Conditions and measures related to personal protection, hygiene and health evaluation
Wear suitable gloves tested to EN374.; For further specification, refer to section 8 of the SDS.
Use suitable eye protection.; For further specification, refer to section 8 of the SDS.
APF of RPE = 40 (97.5% respiratory protection).
Specific RPE may be required depending on the type of the conducted welding process and compliance with national regulations has to be assured. Please refer to e.g. http://european-welding.org/wp-content/uploads/2016/10/Communication-statements_july_2010.pdf .

11.3. Exposure estimation and reference to its source

11.3.1. Environmental release and exposure: Welding in industrial settings (ERC 12a)

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

11.3.2. Worker exposure: Welding in industrial settings (PROC 25)

Route of exposure and type of effects	Exposure estimate	RCR
Inhalation, local, long term	30 µg/m ³ (MEASE)	0.75

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

Guidance: Please refer to Section 0.3 of this "ES for Communication".