

33. ES 33: Use at industrial sites; Use of nickel-containing anti-seize lubricant

33.1. Title section

Product category: Lubricants, Greases, Release Products (PC 24)

Sector of use: Manufacture of fabricated metal products, except machinery and equipment (SU 15), General manufacturing, e.g. machinery, equipment, vehicles, other transport equipment. (SU 17)

Environment	
1: Use of nickel-containing anti-seize lubricant	ERC 4
Worker	
2: Handling of paste	PROC 8b, PROC 21, PROC 9
3: Application of anti-seize lubricant	PROC 10

33.2. Conditions of use affecting exposure

33.2.1. Control of environmental exposure: Use of nickel-containing anti-seize lubricant (ERC 4)

Amount used, frequency and duration of use (or from service life)
Daily amount per site $\leq 1E-4$ tonnes/day (All the amounts and concentrations are expressed as Ni as this is the driver for the environmental risk assessment.)
Annual amount per site $\leq 2.6E-3$ tonnes/year
Technical and organisational conditions and measures
The substance should not be released to air
The substance should not be released to water
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
Receiving surface water flow $\geq 1.8E4$ m ³ /day
Assumed effluent discharge flow from site $\geq 2E3$ m ³ /day

33.2.2. Control of worker exposure: Handling of paste (PROC 8b, PROC 21, PROC 9)

Product (article) characteristics
Physical form of product; Pastes
Maximum emission potential covered in this ES: Very low.
Amount used (or contained in articles), frequency and duration of use/exposure
Covers daily exposures up to 8 hours
Technical and organisational conditions and measures
Covers use at ambient temperatures.

33.2.3. Control of worker exposure: Application of anti-seize lubricant (PROC 10)

Product (article) characteristics

Physical form of product; Pastes
Maximum emission potential covered in this ES: Low.
Amount used (or contained in articles), frequency and duration of use/exposure
Covers daily exposures up to 8 hours
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.

33.3. Exposure estimation and reference to its source

33.3.1. Environmental release and exposure: Use of nickel-containing anti-seize lubricant (ERC 4)

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

33.3.2. Worker exposure: Handling of paste (PROC 8b, PROC 21, PROC 9)

Route of exposure and type of effects	Exposure estimate	RCR
Inhalation, systemic, long term	0.012 mg/m ³ (Measured data)	0.24
Inhalation, local, long term	0.012 mg/m ³ (Measured data)	0.24
Inhalation, local, acute	0.047 mg/m ³ (Measured data)	< 0.01
Dermal, local, long term	0.76 µg/cm ² (Measured data)	0.022
Combined, systemic, long term		0.24

33.3.3. Worker exposure: Application of anti-seize lubricant (PROC 10)

Route of exposure and type of effects	Exposure estimate	RCR
Inhalation, systemic, long term	0.016 mg/m ³ (Measured data)	0.32
Inhalation, local, long term	0.016 mg/m ³ (Measured data)	0.32
Inhalation, local, acute	0.049 mg/m ³ (Measured data)	< 0.01
Dermal, local, long term	5.18 µg/cm ² (Measured data)	0.148
Combined, systemic, long term		0.32

33.4. 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”.