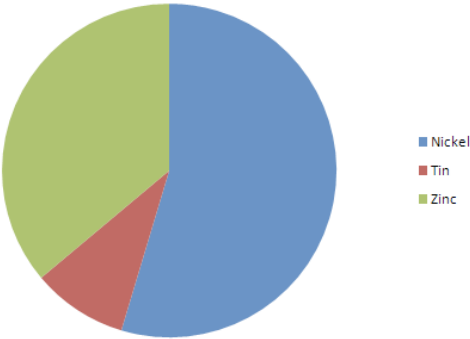


SPERC fact sheet – Use of metals and metal compounds in metallic coating

General information									
Title of specific ERC	Use of metals in metallic coating								
Based on ERC	5 – Industrial use resulting in inclusion into or onto a matrix								
Version	1.1								
Scope	Industrial use of metals in plating, galvanising.								
Coverage	<p>Metal representativeness of background data:</p>  <table border="1"> <caption>Metal representativeness of background data</caption> <thead> <tr> <th>Metal</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Nickel</td> <td>~55%</td> </tr> <tr> <td>Zinc</td> <td>~35%</td> </tr> <tr> <td>Tin</td> <td>~10%</td> </tr> </tbody> </table>	Metal	Percentage	Nickel	~55%	Zinc	~35%	Tin	~10%
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Narrative description	<p>A distinction can be made between hot dip batch process, continuous hot dip process and continuous electroplating process.</p> <p>Electroplating is a plating process that uses electrical current to reduce cations of a desired material from a solution and coat a conductive object with a thin layer of the material, such as a metal.</p> <p>Mechanical milling to remove oxide layers. Pickling. Chemical treatment or blasting of internal tube surfaces. Cleaning and stain removal. Polishing. Pre-patination.</p> <p>Raw materials handling and storing of produced substances are also included in this SPERC.</p>								
Substance use rate	Assessment defaults as set by ERC								
Other operational conditions									

Environment Parameters for Fate Calculation	Assessment defaults as set by ERC Assumed data for receiving water and for the municipal sewage treatment plant are 18000 m ³ /d and 2000 m ³ /d, respectively (resulting dilution factor 10). For marine assessments an additional tenfold dilution is assumed.	
	Typical observed efficiency from background data	Type of RMM
Appropriate Risk management measures (RMM) that may be used to achieve required emission reduction	Air:	
	95.00 – >99%	RMMs for air are present in >90% of the sites: <ul style="list-style-type: none"> • Electrostatic precipitation • Fabric or bag filters (most common) • Ceramic filters • Wet scrubbers (second most common) • Dry or semi-dry scrubbers
	Water:	
		RMMs for water are present in >90% of the sites: <ul style="list-style-type: none"> • Chemical precipitation • Sedimentation • Filtration • Electrolysis (not common)
	Characteristics of specific ERC	Justification
Number of emission days	215 days/year	The minimum of the 10 th percentiles of reported site-specific number of emission days for <ul style="list-style-type: none"> • 76 sites from plating (215 d/yr) • 15 sites from galvanising (284 d/yr)
Emission fractions	air: 0.4% (release after RMM)	The maximum of the 90 th percentile of reported site-specific release factors to air for. <ul style="list-style-type: none"> • 6 sites from galvanising industry (0.08%) • 15 sites from plating industry (0.4%)

	<p>water: 0.6% (release after on-site RMM)</p>	<p>The 90th percentile of reported site-specific release factors to wastewater for</p> <ul style="list-style-type: none"> • 34 sites from galvanising (0.01%) • 64 sites from plating (0.6%)
	<p>soil: n.a.</p>	<p>Assessment default as set by ERC</p>