

Generic exposure scenarios for zinc oxide

Number	Sector	Uses	Code
0	Zinc oxide production	Manufacture Substance	GES _{ZnO} 0
1	Formulation step	Formulation general	GES _{ZnO} 1
2	First tier applications	Manufacturing of other zinc compounds	GES _{ZnO} 2
3		Laboratory reagent	GES _{ZnO} 3
4		As component for solid blends & matrices	GES _{ZnO} 4
5		As component for production of dispersions, pastes and other viscous matrices	GES _{ZnO} 5
6	Second tier applications	DU of ZnO-containing solid preparations	GES _{ZnO} 6
7		DU of ZnO-containing liquid & pasty preparations	GES _{ZnO} 7

Numerous uses were identified for ZnO. These are listed in table below, with the indication of the Generic Exposure Scenario (GES) that is relevant to these identified uses.

Identified uses for ZnO and corresponding Generic Exposure Scenario (GES)

IU number	Identified Use (IU) name	GES code
1	Zinc oxide production-Direct	GESZnO 0
2	Zinc oxide production-Indirect	GESZnO 0
3	Zinc oxide production-Wet	GESZnO 0
9	Component for production of inorganic zinc compounds	GESZnO 2
10	Electrogalvanizing	GESZnO 2
11	Electroplating	GESZnO 2
12	Zinc production by electrowinning	GESZnO 2
13	Laboratory reagent	GESZnO 3
14	Zinc production by pyrometallurgy	GESZnO 2
15	Zinc oxide production & refining	GESZnO 0
16	Component for production of organic zinc compounds	GESZnO 2
17	Component for production of Inorganic pigments	GESZnO 1, GESZnO 4
18	Component for production of Coatings / paints, inks, enamels, varnishes	GESZnO 1, GESZnO 4
19	Use of ZnO-containing paints & coatings	GESZnO 7
20	Artists supply: Use of ZnO-containing paints & coatings	Generic consumer/environment*
21	Component for Paper coating	GESZnO 1, GESZnO 5
22	Use of ZnO-containing paper coatings	GESZnO 6
23	Component for Textile & leather coating / treatment	GESZnO 1, GESZnO 5

IU number	Identified Use (IU) name	GES code
24	Use of ZnO-containing textile & leather coatings	GESZnO 6
25	Additive / component for production of ceramics	GESZnO 1, GESZnO 4
26	Additive /component for production of frits	GESZnO 1, GESZnO 4
27	Use of ZnO-containing glazes and glassy thin film coatings	GESZnO 6
28	Additive for the production of Friction agents	GESZnO 1, GESZnO 4
29	Use of ZnO-containing friction agents: Brake pads	GESZnO 6
30	Additive / component for production of glass	GESZnO 1, GESZnO 4
31	Surface treatment of flat glass	GESZnO 1, GESZnO 4
32	Use of ZnO-containing glass & ceramics in dinnerware	GESZnO 6
33	Use of ZnO-containing glass in displays	GESZnO 6
34	Use of ZnO-containing glassy thin film coatings	GESZnO 6
35	Additive in the manufacturing of electronic components	GESZnO 1, GESZnO 4
36	Additive in the manufacturing of ferrites	GESZnO 1, GESZnO 4
37	Additive in the manufacturing of varistors	GESZnO 1, GESZnO 4
38	ZnO in electrotechnical contact material	GESZnO 1, GESZnO 4
39	Batteries/Fuel cells	GESZnO 1, GESZnO 4, GESZnO 5
40	Component for production of rubber, resins and related preparations	GESZnO 1, GESZnO 5
41	Use of ZnO-containing rubber for tyres	GESZnO 7
42	Use of ZnO-containing rubber and other resins for medical devices and applications	GESZnO 7
43	Component for polymer-matrices, plastics and related preparations	GESZnO 1, GESZnO 5
44	Use of ZnO-containing polymers for floor, wall coverings and similar preparations	GESZnO 7
45	Use of ZnO-containing polymers for cable protecting & isolating coatings	GESZnO 7
46	Use of ZnO-containing polymers for tube &sheet articles	GESZnO 7
47	Use of ZnO-containing polymers for molded articles	GESZnO 7
48	Use of ZnO-containing plastic thin films coatings	Generic consumer/environment
49	Additive for the production of Sealants / Adhesives / Mastics	GESZnO 1, GESZnO 5
50	Use of ZnO-containing Sealants / Adhesives / Mastics	Generic consumer/environment
51	Additive for the production of Lubricants / Grease / Metal working fluids	GESZnO 1, GESZnO 5
52	Use of ZnO-containing Lubricants / Grease / Metal working fluids	Generic consumer/environment
53	Additive for the production of Polishes / wax blends	GESZnO 1, GESZnO 5
54	Use of ZnO-containing Polishes/ wax blends	Generic consumer/environment

IU number	Identified Use (IU) name	GES code
55	Use of ZnO-containing catalysts	GESZnO 1, GESZnO 5
56	Use of ZnO-containing adsorbents	GESZnO 1, GESZnO 5
57	Additive for production of de-icing products	GESZnO 1, GESZnO 5
58	Use of ZnO-containing de-icing products	Generic consumer/environment
59	Additive for the production of pyrotechnic products	GESZnO 1, GESZnO 4
60	Use of ZnO-containing pyrotechnic products	Generic consumer/environment
61	Additive for the formulation of nutrition additives	GESZnO 1, GESZnO 4, GESZnO 5
62	Additive for the formulation of animal feedstuffs	GESZnO 1, GESZnO 4, GESZnO 5
63	Additive for the formulation of biocidal products	GESZnO 1, GESZnO 4, GESZnO 5
64	Use of ZnO-containing biocidal products	GESZnO 6, GESZnO 7, Generic consumer/environment
65	Additive for the formulation of cleaning products	GESZnO 1, GESZnO 4, GESZnO 5
66	Use of ZnO-containing cleaning products	GESZnO 6, GESZnO 7, Generic consumer/environment
67	Additive for the formulation of fertilizers	GESZnO 1, GESZnO 4, GESZnO 5
68	Use of ZnO-containing fertilizer's formulations	Generic consumer/environment
69	Additive in the formulation of cosmetics	GESZnO 1, GESZnO 4, GESZnO 5
70	Use of cosmetics	GESZnO 6, GESZnO 7, Generic consumer/environment
71	Additive in dentistry products	GESZnO 1, GESZnO 4, GESZnO 5
72	Additive in the formulation of pharma / veterinary products	GESZnO 1, GESZnO 4, GESZnO 5
73	Use of pharma / veterinary products	GESZnO 6, GESZnO 7, Generic consumer/environment
74	Use of ZnO-containing antifouling paints	GESZnO 7, Generic consumer/environment*
75	Substrate preparation: sanding of surfaces between application of coatings	GESZnO 6

* corresponds to "GES 8" in IUCLID

Uses by workers in industrial settings

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
1	Zinc oxide production-Direct	as such (substance itself)	<p>Process category (PROC):</p> <p>PROC 2: Use in closed, continuous process with occasional controlled exposure PROC 3: Use in closed batch process (synthesis or formulation) PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 22: Potentially closed processing operations with minerals/metals at elevated temperature. Industrial setting PROC 26: Handling of solid inorganic substances at ambient temperature</p> <p>Market sector by type of chemical product:</p> <p>PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents</p> <p>Environmental release category (ERC):</p> <p>ERC 1: Manufacture of substances</p> <p>Sector of end use (SU):</p> <p>SU 8: Manufacture of bulk, large scale chemicals (including petroleum products) SU 9: Manufacture of fine chemicals</p> <p>Subsequent service life relevant for that use?: yes</p>
2	Zinc oxide production-Indirect	as such (substance itself)	<p>Process category (PROC):</p> <p>PROC 2: Use in closed, continuous process with occasional controlled exposure PROC 3: Use in closed batch process (synthesis or formulation) PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 22: Potentially closed processing operations with minerals/metals at elevated temperature. Industrial setting PROC 26: Handling of solid inorganic substances at ambient temperature</p> <p>Market sector by type of chemical product:</p> <p>PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents</p> <p>Environmental release category (ERC):</p> <p>ERC 1: Manufacture of substances</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>Sector of end use (SU): SU 8: Manufacture of bulk, large scale chemicals (including petroleum products) SU 9: Manufacture of fine chemicals</p> <p>Subsequent service life relevant for that use?: yes</p>
3	Zinc oxide production-Wet	as such (substance itself)	<p>Process category (PROC): PROC 2: Use in closed, continuous process with occasional controlled exposure PROC 3: Use in closed batch process (synthesis or formulation) PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 22: Potentially closed processing operations with minerals/metals at elevated temperature. Industrial setting PROC 26: Handling of solid inorganic substances at ambient temperature</p> <p>Market sector by type of chemical product: PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents</p> <p>Environmental release category (ERC): ERC 1: Manufacture of substances</p> <p>Sector of end use (SU): SU 8: Manufacture of bulk, large scale chemicals (including petroleum products) SU 9: Manufacture of fine chemicals</p> <p>Subsequent service life relevant for that use?: yes</p>
9	Component for production of inorganic zinc compounds	as such (substance itself) in a mixture	<p>Process category (PROC): PROC 2: Use in closed, continuous process with occasional controlled exposure PROC 3: Use in closed batch process (synthesis or formulation) PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 15: Use as laboratory reagent PROC 21: Low energy manipulation of substances bound in materials and/or articles PROC 22: Potentially closed processing operations with minerals/metals at elevated temperature. Industrial setting</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>Market sector by type of chemical product: PC 19: Intermediate PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents PC 21: Laboratory chemicals</p> <p>Environmental release category (ERC): ERC 1: Manufacture of substances ERC 2: Formulation of preparations ERC 6a: Industrial use resulting in manufacture of another substance (use of intermediates)</p> <p>Sector of end use (SU): SU 8: Manufacture of bulk, large scale chemicals (including petroleum products) SU 9: Manufacture of fine chemicals SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys)</p> <p>Subsequent service life relevant for that use?: yes</p>
10	Electrogalvanizing	as such (substance itself)	<p>Process category (PROC): PROC 13: Treatment of articles by dipping and pouring PROC 21: Low energy manipulation of substances bound in materials and/or articles</p> <p>Market sector by type of chemical product: PC 7: Base metals and alloys PC 14: Metal surface treatment products, including galvanic and electroplating products</p> <p>Environmental release category (ERC): ERC 2: Formulation of preparations ERC 5: Industrial use resulting in inclusion into or onto a matrix</p> <p>Sector of end use (SU): SU 15: Manufacture of fabricated metal products, except machinery and equipment SU 17: General manufacturing, e.g. machinery, equipment, vehicles, other transport equipment SU 0: Other: Nace C25.6.1: Treatment and coating of metals</p> <p>Subsequent service life relevant for that use?: yes</p> <p>Article category related to subsequent service life (AC): AC 2: Machinery, mechanical appliances, electrical/electronic articles AC 7: Metal articles</p>
11	Electroplating	as such (substance	<p>Process category (PROC):</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
		itself)	<p>PROC 3: Use in closed batch process (synthesis or formulation) PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 21: Low energy manipulation of substances bound in materials and/or articles</p> <p>Market sector by type of chemical product: PC 7: Base metals and alloys PC 14: Metal surface treatment products, including galvanic and electroplating products</p> <p>Environmental release category (ERC): ERC 2: Formulation of preparations ERC 5: Industrial use resulting in inclusion into or onto a matrix</p> <p>Sector of end use (SU): SU 15: Manufacture of fabricated metal products, except machinery and equipment SU 17: General manufacturing, e.g. machinery, equipment, vehicles, other transport equipment SU 0: Other: Nace C25.6.1: Treatment and coating of metals</p> <p>Subsequent service life relevant for that use?: yes</p> <p>Article category related to subsequent service life (AC): AC 2: Machinery, mechanical appliances, electrical/electronic articles AC 7: Metal articles</p>
12	Zinc production by electrowinning	as such (substance itself)	<p>Process category (PROC): PROC 2: Use in closed, continuous process with occasional controlled exposure PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 22: Potentially closed processing operations with minerals/metals at elevated temperature. Industrial setting PROC 26: Handling of solid inorganic substances at ambient temperature</p> <p>Market sector by type of chemical product: PC 7: Base metals and alloys</p> <p>Environmental release category (ERC): ERC 1: Manufacture of substances</p> <p>Sector of end use (SU): SU 8: Manufacture of bulk, large scale chemicals (including petroleum products) SU 14: Manufacture of basic metals, including alloys</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>SU 0: Other: Nace C24.4.3: Lead, zinc and tin production, E38.3: Materials recovery</p> <p>Subsequent service life relevant for that use?: yes</p>
13	Laboratory reagent	as such (substance itself)	<p>Process category (PROC):</p> <p>PROC 1: Use in closed process, no likelihood of exposure PROC 2: Use in closed, continuous process with occasional controlled exposure PROC 3: Use in closed batch process (synthesis or formulation) PROC 4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 15: Use as laboratory reagent</p> <p>Market sector by type of chemical product:</p> <p>PC 19: Intermediate PC 21: Laboratory chemicals PC 28: Perfumes, fragrances PC 39: Cosmetics, personal care products</p> <p>Environmental release category (ERC):</p> <p>ERC 1: Manufacture of substances ERC 2: Formulation of preparations ERC 4: Industrial use of processing aids in processes and products, not becoming part of articles ERC 6a: Industrial use resulting in manufacture of another substance (use of intermediates) ERC 6b: Industrial use of reactive processing aids</p> <p>Sector of end use (SU):</p> <p>SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys) SU 24: Scientific research and development</p> <p>Subsequent service life relevant for that use?: yes</p>
14	Zinc production by pyrometallurgy	as such (substance itself)	<p>Process category (PROC):</p> <p>PROC 2: Use in closed, continuous process with occasional controlled exposure PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line,</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>including weighing) PROC 23: Open processing and transfer operations with minerals/metals at elevated temperature PROC 26: Handling of solid inorganic substances at ambient temperature</p> <p>Market sector by type of chemical product: PC 7: Base metals and alloys</p> <p>Environmental release category (ERC): ERC 1: Manufacture of substances</p> <p>Sector of end use (SU): SU 14: Manufacture of basic metals, including alloys SU 0: Other: Nace C24.4.3: Lead, zinc and tin production, E38.3: Materials recovery</p> <p>Subsequent service life relevant for that use?: yes</p>
15	Zinc oxide production & refining	as such (substance itself)	<p>Process category (PROC): PROC 2: Use in closed, continuous process with occasional controlled exposure PROC 3: Use in closed batch process (synthesis or formulation) PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 22: Potentially closed processing operations with minerals/metals at elevated temperature. Industrial setting PROC 26: Handling of solid inorganic substances at ambient temperature</p> <p>Market sector by type of chemical product: PC 19: Intermediate PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents</p> <p>Environmental release category (ERC): ERC 1: Manufacture of substances</p> <p>Sector of end use (SU): SU 8: Manufacture of bulk, large scale chemicals (including petroleum products) SU 9: Manufacture of fine chemicals</p> <p>Subsequent service life relevant for that use?: yes</p>
16	Component for production of organic zinc compounds	as such (substance	<p>Process category (PROC):</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
		itself) in a mixture	<p>PROC 1: Use in closed process, no likelihood of exposure PROC 2: Use in closed, continuous process with occasional controlled exposure PROC 3: Use in closed batch process (synthesis or formulation) PROC 4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 15: Use as laboratory reagent</p> <p>Market sector by type of chemical product:</p> <p>PC 19: Intermediate PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents PC 21: Laboratory chemicals PC 24: Lubricants, greases, release products PC 29: Pharmaceuticals PC 39: Cosmetics, personal care products</p> <p>Environmental release category (ERC):</p> <p>ERC 1: Manufacture of substances ERC 2: Formulation of preparations ERC 6a: Industrial use resulting in manufacture of another substance (use of intermediates)</p> <p>Sector of end use (SU):</p> <p>SU 9: Manufacture of fine chemicals SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys) SU 8: Manufacture of bulk, large scale chemicals (including petroleum products)</p> <p>Subsequent service life relevant for that use?: yes</p>
17	Component for production of Inorganic pigments	as such (substance itself) in a mixture	<p>Process category (PROC):</p> <p>PROC 1: Use in closed process, no likelihood of exposure PROC 2: Use in closed, continuous process with occasional controlled exposure PROC 3: Use in closed batch process (synthesis or formulation) PROC 4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 22: Potentially closed processing operations with minerals/metals at elevated</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>temperature. Industrial setting</p> <p>Market sector by type of chemical product: PC 9a: Coatings and paints, thinners, paint removes PC 9b: Fillers, putties, plasters, modelling clay PC 9c: Finger paints PC 0: Other: UCN F05990: Other colouring agents</p> <p>Environmental release category (ERC): ERC 1: Manufacture of substances ERC 2: Formulation of preparations ERC 5: Industrial use resulting in inclusion into or onto a matrix</p> <p>Sector of end use (SU): SU 8: Manufacture of bulk, large scale chemicals (including petroleum products) SU 9: Manufacture of fine chemicals SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys) SU 13: Manufacture of other non-metallic mineral products, e.g. plasters, cement SU 0: Other: Nace C20.1.2: Manufacture of dyes and pigments</p> <p>Subsequent service life relevant for that use?: yes</p>
18	Component for production of Coatings / paints, inks, enamels, varnishes	as such (substance itself) in a mixture	<p>Process category (PROC): PROC 1: Use in closed process, no likelihood of exposure PROC 2: Use in closed, continuous process with occasional controlled exposure PROC 3: Use in closed batch process (synthesis or formulation) PROC 4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)</p> <p>Market sector by type of chemical product: PC 1: Adhesives, sealants PC 9a: Coatings and paints, thinners, paint removes PC 9b: Fillers, putties, plasters, modelling clay PC 9c: Finger paints PC 14: Metal surface treatment products, including galvanic and electroplating products PC 15: Non-metal-surface treatment products PC 18: Ink and toners</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>PC 19: Intermediate PC 26: Paper and board dye, finishing and impregnation products: including bleaches and other processing aids PC 32: Polymer preparations and compounds</p> <p>Environmental release category (ERC):</p> <p>ERC 1: Manufacture of substances ERC 2: Formulation of preparations ERC 3: Formulation in materials ERC 4: Industrial use of processing aids in processes and products, not becoming part of articles ERC 5: Industrial use resulting in inclusion into or onto a matrix ERC 7: Industrial use of substances in closed systems</p> <p>Sector of end use (SU):</p> <p>SU 4: Manufacture of food products SU 5: Manufacture of textiles, leather, fur SU 6a: Manufacture of wood and wood products SU 6b: Manufacture of pulp, paper and paper products SU 8: Manufacture of bulk, large scale chemicals (including petroleum products) SU 9: Manufacture of fine chemicals SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys) SU 11: Manufacture of rubber products SU 12: Manufacture of plastics products, including compounding and conversion SU 13: Manufacture of other non-metallic mineral products, e.g. plasters, cement SU 14: Manufacture of basic metals, including alloys</p> <p>Subsequent service life relevant for that use?: yes</p>
19	Use of ZnO-containing paints & coatings	in a mixture	<p>Process category (PROC):</p> <p>PROC 4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 7: Industrial spraying PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 10: Roller application or brushing PROC 11: Non industrial spraying PROC 13: Treatment of articles by dipping and pouring PROC 19: Hand-mixing with intimate contact and only PPE available.</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>Market sector by type of chemical product:</p> <ul style="list-style-type: none"> PC 1: Adhesives, sealants PC 9a: Coatings and paints, thinners, paint removes PC 9b: Fillers, putties, plasters, modelling clay PC 9c: Finger paints PC 14: Metal surface treatment products, including galvanic and electroplating products PC 15: Non-metal-surface treatment products PC 18: Ink and toners <p>Environmental release category (ERC):</p> <ul style="list-style-type: none"> ERC 4: Industrial use of processing aids in processes and products, not becoming part of articles ERC 5: Industrial use resulting in inclusion into or onto a matrix <p>Sector of end use (SU):</p> <ul style="list-style-type: none"> SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys) <p>Subsequent service life relevant for that use?: yes</p> <p>Article category related to subsequent service life (AC):</p> <ul style="list-style-type: none"> AC 0: Other: coatings for art and creative items
21	Component for Paper coating	as such (substance itself) in a mixture	<p>Process category (PROC):</p> <ul style="list-style-type: none"> PROC 3: Use in closed batch process (synthesis or formulation) PROC 4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 6: Calendering operations PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 13: Treatment of articles by dipping and pouring <p>Market sector by type of chemical product:</p> <ul style="list-style-type: none"> PC 9a: Coatings and paints, thinners, paint removes PC 15: Non-metal-surface treatment products PC 18: Ink and toners PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents PC 21: Laboratory chemicals PC 35: Washing and cleaning products (including solvent based products)

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>PC 26: Paper and board dye, finishing and impregnation products: including bleaches and other processing aids</p> <p>Environmental release category (ERC):</p> <p>ERC 2: Formulation of preparations ERC 6b: Industrial use of reactive processing aids</p> <p>Sector of end use (SU):</p> <p>SU 6b: Manufacture of pulp, paper and paper products SU 7: Printing and reproduction of recorded media SU 8: Manufacture of bulk, large scale chemicals (including petroleum products) SU 9: Manufacture of fine chemicals SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys)</p> <p>Subsequent service life relevant for that use?: yes</p>
22	Downstream use of ZnO containing paper coating products	as such (substance itself) in a mixture	<p>Process category (PROC):</p> <p>PROC 4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 6: Calendering operations PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 10: Roller application or brushing PROC 13: Treatment of articles by dipping and pouring PROC 19: Hand-mixing with intimate contact and only PPE available.</p> <p>Market sector by type of chemical product:</p> <p>PC 9a: Coatings and paints, thinners, paint removes PC 15: Non-metal-surface treatment products PC 18: Ink and toners PC 26: Paper and board dye, finishing and impregnation products: including bleaches and other processing aids</p> <p>Environmental release category (ERC):</p> <p>ERC 4: Industrial use of processing aids in processes and products, not becoming part of articles ERC 5: Industrial use resulting in inclusion into or onto a matrix</p> <p>Sector of end use (SU):</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>SU 6b: Manufacture of pulp, paper and paper products SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys)</p> <p>Subsequent service life relevant for that use?: yes</p> <p>Article category related to subsequent service life (AC): AC 8: Paper articles</p>
23	Component for Textile & leather coating / treatment	as such (substance itself) in a mixture	<p>Process category (PROC):</p> <p>PROC 3: Use in closed batch process (synthesis or formulation) PROC 4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 6: Calendering operations PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 13: Treatment of articles by dipping and pouring</p> <p>Market sector by type of chemical product:</p> <p>PC 9a: Coatings and paints, thinners, paint removes PC 15: Non-metal-surface treatment products PC 19: Intermediate PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents PC 21: Laboratory chemicals PC 23: Leather tanning, dye, finishing, impregnation and care products PC 34: Textile dyes, finishing and impregnating products; including bleaches and other processing aids PC 35: Washing and cleaning products (including solvent based products)</p> <p>Environmental release category (ERC):</p> <p>ERC 2: Formulation of preparations ERC 6b: Industrial use of reactive processing aids</p> <p>Sector of end use (SU):</p> <p>SU 5: Manufacture of textiles, leather, fur SU 8: Manufacture of bulk, large scale chemicals (including petroleum products) SU 9: Manufacture of fine chemicals SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys)</p> <p>Subsequent service life relevant for that use?: yes</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
24	Use of ZnO-containing textile & leather coatings	as such (substance itself) in a mixture	<p>Process category (PROC):</p> <p>PROC 4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 6: Calendering operations PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 10: Roller application or brushing PROC 13: Treatment of articles by dipping and pouring PROC 19: Hand-mixing with intimate contact and only PPE available.</p> <p>Market sector by type of chemical product:</p> <p>PC 9a: Coatings and paints, thinners, paint removes PC 15: Non-metal-surface treatment products PC 23: Leather tanning, dye, finishing, impregnation and care products PC 34: Textile dyes, finishing and impregnating products; including bleaches and other processing aids</p> <p>Environmental release category (ERC):</p> <p>ERC 4: Industrial use of processing aids in processes and products, not becoming part of articles ERC 5: Industrial use resulting in inclusion into or onto a matrix</p> <p>Subsequent service life relevant for that use?: yes</p> <p>Article category related to subsequent service life (AC):</p> <p>AC 6: Leather articles AC 5: Fabrics, textiles and apparel</p>
25	Additive / component for production of ceramics	as such (substance itself) in a mixture	<p>Process category (PROC):</p> <p>PROC 2: Use in closed, continuous process with occasional controlled exposure PROC 3: Use in closed batch process (synthesis or formulation) PROC 4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 10: Roller application or brushing</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>PROC 13: Treatment of articles by dipping and pouring PROC 14: Production of preparations or articles by tableting, compression, extrusion, pelletisation PROC 15: Use as laboratory reagent PROC 22: Potentially closed processing operations with minerals/metals at elevated temperature. Industrial setting PROC 26: Handling of solid inorganic substances at ambient temperature</p> <p>Market sector by type of chemical product:</p> <p>PC 19: Intermediate PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents PC 21: Laboratory chemicals PC 9b: Fillers, putties, plasters, modelling clay</p> <p>Environmental release category (ERC):</p> <p>ERC 1: Manufacture of substances ERC 2: Formulation of preparations ERC 3: Formulation in materials ERC 5: Industrial use resulting in inclusion into or onto a matrix</p> <p>Sector of end use (SU):</p> <p>SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys) SU 13: Manufacture of other non-metallic mineral products, e.g. plasters, cement SU 0: Other: Nace C23.2: Manufacture of refractory products</p> <p>Subsequent service life relevant for that use?: yes</p> <p>Article category related to subsequent service life (AC):</p> <p>AC 4: Stone, plaster, cement, glass and ceramic articles</p>
26	Additive /component for production of frits	as such (substance itself) in a mixture	<p>Process category (PROC):</p> <p>PROC 2: Use in closed, continuous process with occasional controlled exposure PROC 3: Use in closed batch process (synthesis or formulation) PROC 4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 13: Treatment of articles by dipping and pouring PROC 14: Production of preparations or articles by tableting, compression, extrusion,</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>pelletisation PROC 15: Use as laboratory reagent PROC 17: Lubrication at high energy conditions and in partly open process PROC 22: Potentially closed processing operations with minerals/metals at elevated temperature. Industrial setting PROC 26: Handling of solid inorganic substances at ambient temperature</p> <p>Market sector by type of chemical product:</p> <p>PC 19: Intermediate PC 0: Other: UCN R30100-R30200: Raw materials for synthesis and intermediate products/Raw materials for production of glass and ceramics</p> <p>Environmental release category (ERC):</p> <p>ERC 1: Manufacture of substances ERC 2: Formulation of preparations ERC 3: Formulation in materials ERC 5: Industrial use resulting in inclusion into or onto a matrix ERC 6a: Industrial use resulting in manufacture of another substance (use of intermediates)</p> <p>Sector of end use (SU):</p> <p>SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys) SU 13: Manufacture of other non-metallic mineral products, e.g. plasters, cement</p> <p>Subsequent service life relevant for that use?: yes</p> <p>Article category related to subsequent service life (AC):</p> <p>AC 4: Stone, plaster, cement, glass and ceramic articles AC 0: Other: TARIC 8541 21 transistors other than photosensitive transistors AC 3: Electrical batteries and accumulators</p>
27	Use of ZnO-containing glazes and glassy thin film coatings	in a mixture	<p>Process category (PROC):</p> <p>PROC 7: Industrial spraying PROC 10: Roller application or brushing PROC 14: Production of preparations or articles by tableting, compression, extrusion, pelletisation PROC 26: Handling of solid inorganic substances at ambient temperature</p> <p>Market sector by type of chemical product:</p> <p>PC 9a: Coatings and paints, thinners, paint removes PC 19: Intermediate PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents PC 0: Other: UCN G15000: glazing materials, enamels, ...</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>Environmental release category (ERC): ERC 5: Industrial use resulting in inclusion into or onto a matrix</p> <p>Sector of end use (SU): SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys) SU 13: Manufacture of other non-metallic mineral products, e.g. plasters, cement SU 0: Other: Nace F43.3.4 - Painting and glazing</p> <p>Subsequent service life relevant for that use?: yes</p> <p>Article category related to subsequent service life (AC): AC 4: Stone, plaster, cement, glass and ceramic articles</p>
28	Additive for the production of Friction agents	as such (substance itself) in a mixture	<p>Process category (PROC): PROC 4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 14: Production of preparations or articles by tableting, compression, extrusion, pelletisation</p> <p>Market sector by type of chemical product: PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents PC 0: Other: UCN F40000: Friction agents - (e.g. brake pads)</p> <p>Environmental release category (ERC): ERC 2: Formulation of preparations ERC 5: Industrial use resulting in inclusion into or onto a matrix</p> <p>Sector of end use (SU): SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys) SU 13: Manufacture of other non-metallic mineral products, e.g. plasters, cement SU 0: Other: Nace C23.9.1: Production of abrasive products</p> <p>Subsequent service life relevant for that use?: yes</p> <p>Article category related to subsequent service life (AC):</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			AC 0: Other: TARIC 6813 81: brake linings and pads
29	Downstream use of ZnO containing friction agents (breakpads)	in a mixture	<p>Process category (PROC): PROC 17: Lubrication at high energy conditions and in partly open process PROC 22: Potentially closed processing operations with minerals/metals at elevated temperature. Industrial setting PROC 24: High (mechanical) energy work-up of substances bound in materials and/or articles</p> <p>Market sector by type of chemical product: PC 0: Other: UCNF40000: Friction agents - (e.g. brake pads)</p> <p>Environmental release category (ERC): ERC 10b: Wide dispersive outdoor use of long-life articles and materials with high or intended release (including abrasive processing)</p> <p>Sector of end use (SU): SU 17: General manufacturing, e.g. machinery, equipment, vehicles, other transport equipment</p> <p>Subsequent service life relevant for that use?: yes</p> <p>Article category related to subsequent service life (AC): AC 0: Other: TARIC 6813 81: brake linings and pads AC 1: Vehicles AC 2: Machinery, mechanical appliances, electrical/electronic articles</p>
30	Additive / component for production of glass	as such (substance itself) in a mixture	<p>Process category (PROC): PROC 2: Use in closed, continuous process with occasional controlled exposure PROC 3: Use in closed batch process (synthesis or formulation) PROC 4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 22: Potentially closed processing operations with minerals/metals at elevated temperature. Industrial setting</p> <p>Market sector by type of chemical product: PC 19: Intermediate PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>PC 0: Other: UCN R30200: Raw materials for production of glass and ceramics</p> <p>Environmental release category (ERC):</p> <p>ERC 2: Formulation of preparations ERC 3: Formulation in materials ERC 5: Industrial use resulting in inclusion into or onto a matrix ERC 6a: Industrial use resulting in manufacture of another substance (use of intermediates)</p> <p>Sector of end use (SU):</p> <p>SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys) SU 13: Manufacture of other non-metallic mineral products, e.g. plasters, cement SU 0: Other: Nace C23.1: Manufacture of glass and glass products</p> <p>Subsequent service life relevant for that use?: yes</p> <p>Article category related to subsequent service life (AC):</p> <p>AC 4: Stone, plaster, cement, glass and ceramic articles</p>
31	Surface treatment of flat glass	as such (substance itself)	<p>Process category (PROC):</p> <p>PROC 2: Use in closed, continuous process with occasional controlled exposure PROC 6: Calendering operations PROC 26: Handling of solid inorganic substances at ambient temperature</p> <p>Market sector by type of chemical product:</p> <p>PC 19: Intermediate PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents PC 0: Other: UCN F12000: Coating agent</p> <p>Environmental release category (ERC):</p> <p>ERC 2: Formulation of preparations ERC 4: Industrial use of processing aids in processes and products, not becoming part of articles ERC 6b: Industrial use of reactive processing aids</p> <p>Sector of end use (SU):</p> <p>SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys) SU 13: Manufacture of other non-metallic mineral products, e.g. plasters, cement SU 0: Other: Nace C23.1.1 - Manufacture of flat glass</p> <p>Subsequent service life relevant for that use?: yes</p>
32	Use of ZnO containing glass and ceramics in dinnerware	in a mixture	<p>Process category (PROC):</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>PROC 14: Production of preparations or articles by tableting, compression, extrusion, pelletisation PROC 26: Handling of solid inorganic substances at ambient temperature</p> <p>Market sector by type of chemical product: PC 19: Intermediate PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents</p> <p>Environmental release category (ERC): ERC 5: Industrial use resulting in inclusion into or onto a matrix</p> <p>Sector of end use (SU): SU 0: Other: C23.4 - Manufacture of other porcelain and ceramic products SU 13: Manufacture of other non-metallic mineral products, e.g. plasters, cement</p> <p>Subsequent service life relevant for that use?: yes</p> <p>Article category related to subsequent service life (AC): AC 4: Stone, plaster, cement, glass and ceramic articles AC 0: Other: TARIC 6911: tableware, kitchenware, household products in porcelain or china</p>
33	Use of ZnO containing glass in displays	in a mixture	<p>Process category (PROC): PROC 14: Production of preparations or articles by tableting, compression, extrusion, pelletisation PROC 26: Handling of solid inorganic substances at ambient temperature</p> <p>Market sector by type of chemical product: PC 19: Intermediate PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents</p> <p>Environmental release category (ERC): ERC 5: Industrial use resulting in inclusion into or onto a matrix</p> <p>Sector of end use (SU): SU 13: Manufacture of other non-metallic mineral products, e.g. plasters, cement SU 16: Manufacture of computer, electronic and optical products, electrical equipment SU 0: Other: Nace C23.1: C23.1 - Manufacture of glass and glass products</p> <p>Subsequent service life relevant for that use?: yes</p>
34	Use of ZnO containing glassy thin films coatings	in a mixture	<p>Process category (PROC):</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>PROC 7: Industrial spraying PROC 10: Roller application or brushing PROC 14: Production of preparations or articles by tableting, compression, extrusion, pelletisation PROC 26: Handling of solid inorganic substances at ambient temperature</p> <p>Market sector by type of chemical product:</p> <p>PC 9a: Coatings and paints, thinners, paint removes PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents PC 33: Semiconductors</p> <p>Environmental release category (ERC):</p> <p>ERC 5: Industrial use resulting in inclusion into or onto a matrix</p> <p>Sector of end use (SU):</p> <p>SU 0: Other: Nace C23.1 - Manufacture of glass SU 13: Manufacture of other non-metallic mineral products, e.g. plasters, cement</p> <p>Subsequent service life relevant for that use?: yes</p> <p>Article category related to subsequent service life (AC):</p> <p>AC 2: Machinery, mechanical appliances, electrical/electronic articles AC 4: Stone, plaster, cement, glass and ceramic articles</p>
35	Additive in the manufacturing of electronic components	as such (substance itself) in a mixture	<p>Process category (PROC):</p> <p>PROC 3: Use in closed batch process (synthesis or formulation) PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 14: Production of preparations or articles by tableting, compression, extrusion, pelletisation PROC 22: Potentially closed processing operations with minerals/metals at elevated temperature. Industrial setting PROC 24: High (mechanical) energy work-up of substances bound in materials and/or articles</p> <p>Market sector by type of chemical product:</p> <p>PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents PC 0: Other: UCN E0700: Electric and electromechanical components</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>Environmental release category (ERC): ERC 2: Formulation of preparations ERC 5: Industrial use resulting in inclusion into or onto a matrix</p> <p>Sector of end use (SU): SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys) SU 13: Manufacture of other non-metallic mineral products, e.g. plasters, cement SU 0: Other: Nace 26.1.1: Manufacture of electronic components</p> <p>Subsequent service life relevant for that use?: yes</p> <p>Article category related to subsequent service life (AC): AC 2: Machinery, mechanical appliances, electrical/electronic articles AC 4: Stone, plaster, cement, glass and ceramic articles</p>
36	Additive in the manufacturing of ferrites	as such (substance itself) in a mixture	<p>Process category (PROC): PROC 3: Use in closed batch process (synthesis or formulation) PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 14: Production of preparations or articles by tableting, compression, extrusion, pelletisation PROC 22: Potentially closed processing operations with minerals/metals at elevated temperature. Industrial setting PROC 24: High (mechanical) energy work-up of substances bound in materials and/or articles</p> <p>Market sector by type of chemical product: PC 19: Intermediate PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents PC 0: Other: UCN E0700: Electric and electromechanical components</p> <p>Environmental release category (ERC): ERC 2: Formulation of preparations ERC 5: Industrial use resulting in inclusion into or onto a matrix</p> <p>Sector of end use (SU): SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys)</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>SU 13: Manufacture of other non-metallic mineral products, e.g. plasters, cement SU 16: Manufacture of computer, electronic and optical products, electrical equipment SU 0: Other: Nace C23.4.3: Manufacture of ceramic insulators and insulating fittings C23.4.4 - Manufacture of other technical ceramic products</p> <p>Subsequent service life relevant for that use?: yes</p> <p>Article category related to subsequent service life (AC): AC 2: Machinery, mechanical appliances, electrical/electronic articles AC 4: Stone, plaster, cement, glass and ceramic articles</p>
37	Additive in the manufacturing of varistors	as such (substance itself) in a mixture	<p>Process category (PROC): PROC 3: Use in closed batch process (synthesis or formulation) PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 14: Production of preparations or articles by tableting, compression, extrusion, pelletisation PROC 22: Potentially closed processing operations with minerals/metals at elevated temperature. Industrial setting PROC 24: High (mechanical) energy work-up of substances bound in materials and/or articles</p> <p>Market sector by type of chemical product: PC 19: Intermediate PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents PC 0: Other: UCN E0700: Electric and electromechanical components</p> <p>Environmental release category (ERC): ERC 2: Formulation of preparations ERC 5: Industrial use resulting in inclusion into or onto a matrix</p> <p>Sector of end use (SU): SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys) SU 13: Manufacture of other non-metallic mineral products, e.g. plasters, cement SU 16: Manufacture of computer, electronic and optical products, electrical equipment SU 0: Other: Nace C23.4.3: Manufacture of ceramic insulators and insulating fittings C23.4.4 - Manufacture of other technical ceramic products</p> <p>Subsequent service life relevant for that use?: yes</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>Article category related to subsequent service life (AC): AC 2: Machinery, mechanical appliances, electrical/electronic articles AC 4: Stone, plaster, cement, glass and ceramic articles</p>
38	ZnO in electrotechnical contact material	as such (substance itself)	<p>Process category (PROC): PROC 3: Use in closed batch process (synthesis or formulation) PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 14: Production of preparations or articles by tableting, compression, extrusion, pelletisation</p> <p>Market sector by type of chemical product: PC 7: Base metals and alloys PC 14: Metal surface treatment products, including galvanic and electroplating products PC 19: Intermediate</p> <p>Environmental release category (ERC): ERC 2: Formulation of preparations ERC 5: Industrial use resulting in inclusion into or onto a matrix ERC 6a: Industrial use resulting in manufacture of another substance (use of intermediates)</p> <p>Sector of end use (SU): SU 13: Manufacture of other non-metallic mineral products, e.g. plasters, cement SU 14: Manufacture of basic metals, including alloys SU 16: Manufacture of computer, electronic and optical products, electrical equipment</p> <p>Subsequent service life relevant for that use?: yes</p> <p>Article category related to subsequent service life (AC): AC 2: Machinery, mechanical appliances, electrical/electronic articles AC 4: Stone, plaster, cement, glass and ceramic articles AC 7: Metal articles</p>
39	Batteries/Fuel cells	as such (substance itself) in a mixture	<p>Process category (PROC): PROC 3: Use in closed batch process (synthesis or formulation) PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 14: Production of preparations or articles by tableting, compression, extrusion, pelletisation PROC 13: Treatment of articles by dipping and pouring</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>Market sector by type of chemical product:</p> <p>PC 14: Metal surface treatment products, including galvanic and electroplating products PC 19: Intermediate PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents PC 21: Laboratory chemicals</p> <p>Environmental release category (ERC):</p> <p>ERC 2: Formulation of preparations ERC 5: Industrial use resulting in inclusion into or onto a matrix</p> <p>Sector of end use (SU):</p> <p>SU 16: Manufacture of computer, electronic and optical products, electrical equipment SU 0: Other: Nace C27.2: Manufacture of batteries and accumulators</p> <p>Subsequent service life relevant for that use?: yes</p> <p>Article category related to subsequent service life (AC):</p> <p>AC 3: Electrical batteries and accumulators</p>
40	Component for production of rubber, resins and related preparations	as such (substance itself) in a mixture	<p>Process category (PROC):</p> <p>PROC 3: Use in closed batch process (synthesis or formulation) PROC 4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 6: Calendering operations PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 10: Roller application or brushing PROC 12: Use of blowing agents in manufacture of foam PROC 13: Treatment of articles by dipping and pouring PROC 14: Production of preparations or articles by tableting, compression, extrusion, pelletisation PROC 21: Low energy manipulation of substances bound in materials and/or articles PROC 24: High (mechanical) energy work-up of substances bound in materials and/or articles</p> <p>Market sector by type of chemical product:</p> <p>PC 9a: Coatings and paints, thinners, paint removes PC 9b: Fillers, putties, plasters, modelling clay PC 9c: Finger paints</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents PC 24: Lubricants, greases, release products PC 32: Polymer preparations and compounds PC 33: Semiconductors</p> <p>Environmental release category (ERC): ERC 2: Formulation of preparations ERC 3: Formulation in materials ERC 4: Industrial use of processing aids in processes and products, not becoming part of articles ERC 5: Industrial use resulting in inclusion into or onto a matrix ERC 6b: Industrial use of reactive processing aids ERC 6d: Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers</p> <p>Sector of end use (SU): SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys) SU 11: Manufacture of rubber products</p> <p>Subsequent service life relevant for that use?: yes</p> <p>Article category related to subsequent service life (AC): AC 10: Rubber articles</p>
41	Use of ZnO-containing rubber for tyres	in a mixture	<p>Process category (PROC): PROC 14: Production of preparations or articles by tableting, compression, extrusion, pelletisation PROC 24: High (mechanical) energy work-up of substances bound in materials and/or articles</p> <p>Market sector by type of chemical product: PC 32: Polymer preparations and compounds</p> <p>Environmental release category (ERC): ERC 6d: Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers ERC 5: Industrial use resulting in inclusion into or onto a matrix</p> <p>Sector of end use (SU): SU 0: Other: Nace: C22.1.1 - Manufacture of rubber tyres and tubes; retreading and rebuilding of rubber tyres SU 11: Manufacture of rubber products</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>Subsequent service life relevant for that use?: yes</p> <p>Article category related to subsequent service life (AC): AC 10: Rubber articles AC 1: Vehicles</p>
42	Use of ZnO containing rubber and resins for medical devices and applications	in a mixture	<p>Process category (PROC): PROC 1: Use in closed process, no likelihood of exposure PROC 13: Treatment of articles by dipping and pouring PROC 15: Use as laboratory reagent</p> <p>Market sector by type of chemical product: PC 32: Polymer preparations and compounds</p> <p>Environmental release category (ERC): ERC 7: Industrial use of substances in closed systems</p> <p>Sector of end use (SU): SU 20: Health services</p> <p>Subsequent service life relevant for that use?: yes</p> <p>Article category related to subsequent service life (AC): AC 10: Rubber articles</p>
43	Component for polymer-matrices, plastics and related preparations	as such (substance itself) in a mixture	<p>Process category (PROC): PROC 2: Use in closed, continuous process with occasional controlled exposure PROC 3: Use in closed batch process (synthesis or formulation) PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 6: Calendering operations PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 10: Roller application or brushing PROC 13: Treatment of articles by dipping and pouring PROC 14: Production of preparations or articles by tableting, compression, extrusion, pelletisation PROC 21: Low energy manipulation of substances bound in materials and/or articles PROC 24: High (mechanical) energy work-up of substances bound in materials and/or articles</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>Market sector by type of chemical product: PC 19: Intermediate PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents PC 32: Polymer preparations and compounds PC 33: Semiconductors</p> <p>Environmental release category (ERC): ERC 1: Manufacture of substances ERC 3: Formulation in materials ERC 5: Industrial use resulting in inclusion into or onto a matrix ERC 6a: Industrial use resulting in manufacture of another substance (use of intermediates)</p> <p>Sector of end use (SU): SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys) SU 12: Manufacture of plastics products, including compounding and conversion</p> <p>Subsequent service life relevant for that use?: yes</p> <p>Article category related to subsequent service life (AC): AC 1: Vehicles AC 2: Machinery, mechanical appliances, electrical/electronic articles AC 3: Electrical batteries and accumulators AC 5: Fabrics, textiles and apparel AC 13: Plastic articles</p>
44	Use of ZnO-containing polymers for floor, wall coverings and similar preparations	in a mixture	<p>Process category (PROC): PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 21: Low energy manipulation of substances bound in materials and/or articles</p> <p>Market sector by type of chemical product: PC 32: Polymer preparations and compounds</p> <p>Environmental release category (ERC): ERC 8c: Wide dispersive indoor use resulting in inclusion into or onto a matrix ERC 11a: Wide dispersive indoor use of long-life articles and materials with low release</p> <p>Sector of end use (SU): SU 12: Manufacture of plastics products, including compounding and conversion SU 19: Building and construction work</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>Subsequent service life relevant for that use?: yes</p> <p>Article category related to subsequent service life (AC): AC 5: Fabrics, textiles and apparel AC 13: Plastic articles</p>
45	Use of ZnO-containing polymers for cable protecting & isolating coatings	in a mixture	<p>Process category (PROC): PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 13: Treatment of articles by dipping and pouring PROC 14: Production of preparations or articles by tableting, compression, extrusion, pelletisation PROC 21: Low energy manipulation of substances bound in materials and/or articles</p> <p>Market sector by type of chemical product: PC 32: Polymer preparations and compounds</p> <p>Environmental release category (ERC): ERC 3: Formulation in materials</p> <p>Sector of end use (SU): SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys) SU 12: Manufacture of plastics products, including compounding and conversion SU 19: Building and construction work</p> <p>Subsequent service life relevant for that use?: yes</p> <p>Article category related to subsequent service life (AC): AC 1: Vehicles AC 3: Electrical batteries and accumulators AC 13: Plastic articles</p>
46	Use of ZnO-containing polymers for tube &sheet articles	in a mixture	<p>Process category (PROC): PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 13: Treatment of articles by dipping and pouring PROC 14: Production of preparations or articles by tableting, compression, extrusion, pelletisation PROC 21: Low energy manipulation of substances bound in materials and/or articles</p> <p>Market sector by type of chemical product:</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>PC 32: Polymer preparations and compounds</p> <p>Environmental release category (ERC):</p> <p>ERC 3: Formulation in materials ERC 5: Industrial use resulting in inclusion into or onto a matrix</p> <p>Sector of end use (SU):</p> <p>SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys) SU 12: Manufacture of plastics products, including compounding and conversion SU 19: Building and construction work</p> <p>Subsequent service life relevant for that use?: yes</p> <p>Article category related to subsequent service life (AC):</p> <p>AC 1: Vehicles AC 3: Electrical batteries and accumulators AC 13: Plastic articles</p>
47	Use of ZnO-containing polymers for molded articles	in a mixture	<p>Process category (PROC):</p> <p>PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 13: Treatment of articles by dipping and pouring PROC 14: Production of preparations or articles by tableting, compression, extrusion, pelletisation PROC 21: Low energy manipulation of substances bound in materials and/or articles PROC 24: High (mechanical) energy work-up of substances bound in materials and/or articles</p> <p>Market sector by type of chemical product:</p> <p>PC 32: Polymer preparations and compounds</p> <p>Environmental release category (ERC):</p> <p>ERC 3: Formulation in materials ERC 5: Industrial use resulting in inclusion into or onto a matrix</p> <p>Sector of end use (SU):</p> <p>SU 1: Agriculture, forestry and fishing SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys) SU 12: Manufacture of plastics products, including compounding and conversion SU 17: General manufacturing, e.g. machinery, equipment, vehicles, other transport equipment SU 19: Building and construction work</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>Subsequent service life relevant for that use?: yes</p> <p>Article category related to subsequent service life (AC):</p> <p>AC 1: Vehicles AC 3: Electrical batteries and accumulators AC 13: Plastic articles</p>
49	Additive for the production of Sealants / Adhesives / Mastics	as such (substance itself) in a mixture	<p>Process category (PROC):</p> <p>PROC 3: Use in closed batch process (synthesis or formulation) PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 10: Roller application or brushing PROC 11: Non industrial spraying PROC 13: Treatment of articles by dipping and pouring PROC 14: Production of preparations or articles by tableting, compression, extrusion, pelletisation PROC 20: Heat and pressure transfer fluids in dispersive, professional use but closed systems PROC 21: Low energy manipulation of substances bound in materials and/or articles PROC 24: High (mechanical) energy work-up of substances bound in materials and/or articles</p> <p>Market sector by type of chemical product:</p> <p>PC 1: Adhesives, sealants PC 9a: Coatings and paints, thinners, paint removes PC 9b: Fillers, putties, plasters, modelling clay PC 9c: Finger paints PC 14: Metal surface treatment products, including galvanic and electroplating products PC 19: Intermediate PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents PC 24: Lubricants, greases, release products PC 32: Polymer preparations and compounds</p> <p>Environmental release category (ERC):</p> <p>ERC 1: Manufacture of substances ERC 2: Formulation of preparations ERC 3: Formulation in materials ERC 5: Industrial use resulting in inclusion into or onto a matrix ERC 6d: Industrial use of process regulators for polymerisation processes in production of</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>resins, rubbers, polymers ERC 6a: Industrial use resulting in manufacture of another substance (use of intermediates)</p> <p>Sector of end use (SU): SU 6a: Manufacture of wood and wood products SU 6b: Manufacture of pulp, paper and paper products SU 8: Manufacture of bulk, large scale chemicals (including petroleum products) SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys)</p> <p>Subsequent service life relevant for that use?: yes</p> <p>Article category related to subsequent service life (AC): AC 1: Vehicles AC 2: Machinery, mechanical appliances, electrical/electronic articles AC 7: Metal articles AC 11: Wood articles</p>
51	Additive for the production of Lubricants / Grease / Metal working fluids	as such (substance itself) in a mixture	<p>Process category (PROC): PROC 3: Use in closed batch process (synthesis or formulation) PROC 4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 10: Roller application or brushing PROC 13: Treatment of articles by dipping and pouring</p> <p>Market sector by type of chemical product: PC 14: Metal surface treatment products, including galvanic and electroplating products PC 24: Lubricants, greases, release products PC 25: Metal working fluids PC 32: Polymer preparations and compounds</p> <p>Environmental release category (ERC): ERC 1: Manufacture of substances ERC 2: Formulation of preparations ERC 3: Formulation in materials ERC 5: Industrial use resulting in inclusion into or onto a matrix ERC 6a: Industrial use resulting in manufacture of another substance (use of intermediates) ERC 6d: Industrial use of process regulators for polymerisation processes in production of</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>resins, rubbers, polymers</p> <p>Sector of end use (SU): SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys) SU 18: Manufacture of furniture</p> <p>Subsequent service life relevant for that use?: yes</p> <p>Article category related to subsequent service life (AC): AC 1: Vehicles AC 2: Machinery, mechanical appliances, electrical/electronic articles AC 7: Metal articles</p>
53	Additive for the production of Polishes / wax blends	as such (substance itself) in a mixture	<p>Process category (PROC): PROC 3: Use in closed batch process (synthesis or formulation) PROC 4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 7: Industrial spraying PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 10: Roller application or brushing PROC 11: Non industrial spraying PROC 13: Treatment of articles by dipping and pouring PROC 19: Hand-mixing with intimate contact and only PPE available.</p> <p>Market sector by type of chemical product: PC 9a: Coatings and paints, thinners, paint removes PC 9b: Fillers, putties, plasters, modelling clay PC 14: Metal surface treatment products, including galvanic and electroplating products PC 25: Metal working fluids PC 31: Polishes and wax blends</p> <p>Environmental release category (ERC): ERC 1: Manufacture of substances ERC 2: Formulation of preparations ERC 3: Formulation in materials ERC 5: Industrial use resulting in inclusion into or onto a matrix ERC 6a: Industrial use resulting in manufacture of another substance (use of intermediates) ERC 6d: Industrial use of process regulators for polymerisation processes in production of</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>resins, rubbers, polymers</p> <p>Sector of end use (SU): SU 9: Manufacture of fine chemicals SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys) SU 18: Manufacture of furniture</p> <p>Subsequent service life relevant for that use?: yes</p> <p>Article category related to subsequent service life (AC): AC 1: Vehicles AC 2: Machinery, mechanical appliances, electrical/electronic articles AC 7: Metal articles</p>
55	Use of ZnO-containing catalysts	in a mixture	<p>Process category (PROC): PROC 1: Use in closed process, no likelihood of exposure PROC 2: Use in closed, continuous process with occasional controlled exposure PROC 3: Use in closed batch process (synthesis or formulation) PROC 4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 14: Production of preparations or articles by tableting, compression, extrusion, pelletisation</p> <p>Market sector by type of chemical product: PC 2: Adsorbents PC 9b: Fillers, putties, plasters, modelling clay PC 19: Intermediate PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents PC 40: Extraction agents</p> <p>Environmental release category (ERC): ERC 1: Manufacture of substances ERC 2: Formulation of preparations ERC 4: Industrial use of processing aids in processes and products, not becoming part of articles ERC 5: Industrial use resulting in inclusion into or onto a matrix ERC 6a: Industrial use resulting in manufacture of another substance (use of intermediates)</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>ERC 6b: Industrial use of reactive processing aids</p> <p>Sector of end use (SU):</p> <p>SU 8: Manufacture of bulk, large scale chemicals (including petroleum products)</p> <p>SU 9: Manufacture of fine chemicals</p> <p>SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys)</p> <p>Subsequent service life relevant for that use?: yes</p>
56	Use of ZnO-containing adsorbents	in a mixture	<p>Process category (PROC):</p> <p>PROC 1: Use in closed process, no likelihood of exposure</p> <p>PROC 3: Use in closed batch process (synthesis or formulation)</p> <p>PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact)</p> <p>PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities</p> <p>PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)</p> <p>PROC 22: Potentially closed processing operations with minerals/metals at elevated temperature. Industrial setting</p> <p>Market sector by type of chemical product:</p> <p>PC 2: Adsorbents</p> <p>PC 9b: Fillers, putties, plasters, modelling clay</p> <p>PC 19: Intermediate</p> <p>PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents</p> <p>PC 40: Extraction agents</p> <p>Environmental release category (ERC):</p> <p>ERC 2: Formulation of preparations</p> <p>ERC 5: Industrial use resulting in inclusion into or onto a matrix</p> <p>Sector of end use (SU):</p> <p>SU 8: Manufacture of bulk, large scale chemicals (including petroleum products)</p> <p>SU 9: Manufacture of fine chemicals</p> <p>Subsequent service life relevant for that use?: yes</p>
57	Additive for production of de-icing products	as such (substance itself) in a mixture	<p>Process category (PROC):</p> <p>PROC 3: Use in closed batch process (synthesis or formulation)</p> <p>PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact)</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)</p> <p>Market sector by type of chemical product:</p> <p>PC 4: Anti-freeze and de-icing products PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents PC 35: Washing and cleaning products (including solvent based products)</p> <p>Environmental release category (ERC):</p> <p>ERC 2: Formulation of preparations ERC 5: Industrial use resulting in inclusion into or onto a matrix</p> <p>Sector of end use (SU):</p> <p>SU 9: Manufacture of fine chemicals SU 8: Manufacture of bulk, large scale chemicals (including petroleum products)</p> <p>Subsequent service life relevant for that use?: yes</p>
59	Additive for the production of pyrotechnic products	as such (substance itself) in a mixture	<p>Process category (PROC):</p> <p>PROC 3: Use in closed batch process (synthesis or formulation) PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 14: Production of preparations or articles by tableting, compression, extrusion, pelletisation</p> <p>Market sector by type of chemical product:</p> <p>PC 9b: Fillers, putties, plasters, modelling clay PC 11: Explosives</p> <p>Environmental release category (ERC):</p> <p>ERC 2: Formulation of preparations ERC 3: Formulation in materials ERC 6b: Industrial use of reactive processing aids</p> <p>Sector of end use (SU):</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>SU 9: Manufacture of fine chemicals SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys) SU 0: Other: Nace C20.5.1: Manufacture of explosives</p> <p>Subsequent service life relevant for that use?: yes</p>
61	Additive for the formulation of nutrition additives	as such (substance itself) in a mixture	<p>Process category (PROC): PROC 3: Use in closed batch process (synthesis or formulation) PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)</p> <p>Market sector by type of chemical product: PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents PC 29: Pharmaceuticals</p> <p>Environmental release category (ERC): ERC 2: Formulation of preparations</p> <p>Sector of end use (SU): SU 4: Manufacture of food products</p> <p>Subsequent service life relevant for that use?: yes</p>
62	Additive for the formulation of animal feedstuffs	as such (substance itself) in a mixture	<p>Process category (PROC): PROC 3: Use in closed batch process (synthesis or formulation) PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)</p> <p>Market sector by type of chemical product: PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents PC 29: Pharmaceuticals</p> <p>Environmental release category (ERC): ERC 2: Formulation of preparations</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>Sector of end use (SU): SU 4: Manufacture of food products</p> <p>Subsequent service life relevant for that use?: yes</p>
63	Additive for the formulation of biocidal products	as such (substance itself) in a mixture	<p>Process category (PROC): PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)</p> <p>Market sector by type of chemical product: PC 8: Biocidal products (e.g. disinfectants, pest control) PC 37: Water treatment chemicals</p> <p>Environmental release category (ERC): ERC 2: Formulation of preparations</p> <p>Sector of end use (SU): SU 9: Manufacture of fine chemicals SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys)</p> <p>Subsequent service life relevant for that use?: yes</p>
65	ZnO as additive for formulation of cleaning products	as such (substance itself)	<p>Process category (PROC): PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)</p> <p>Market sector by type of chemical product: PC 8: Biocidal products (e.g. disinfectants, pest control) PC 37: Water treatment chemicals</p> <p>Environmental release category (ERC): ERC 2: Formulation of preparations</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>Sector of end use (SU):</p> <p>SU 9: Manufacture of fine chemicals SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys) SU 0: Other: C20.2 - Manufacture of pesticides and other agrochemical products SU 23: Electricity, steam, gas water supply and sewage treatment</p> <p>Subsequent service life relevant for that use?: yes</p>
67	Additive for the formulation of fertilizers	as such (substance itself) in a mixture	<p>Process category (PROC):</p> <p>PROC 1: Use in closed process, no likelihood of exposure PROC 2: Use in closed, continuous process with occasional controlled exposure PROC 3: Use in closed batch process (synthesis or formulation) PROC 4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 13: Treatment of articles by dipping and pouring</p> <p>Market sector by type of chemical product:</p> <p>PC 9b: Fillers, putties, plasters, modelling clay PC 12: Fertilisers PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents PC 21: Laboratory chemicals</p> <p>Environmental release category (ERC):</p> <p>ERC 2: Formulation of preparations ERC 3: Formulation in materials ERC 5: Industrial use resulting in inclusion into or onto a matrix</p> <p>Sector of end use (SU):</p> <p>SU 1: Agriculture, forestry and fishing SU 8: Manufacture of bulk, large scale chemicals (including petroleum products) SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys)</p> <p>Subsequent service life relevant for that use?: yes</p>
69	Additive in the formulation of cosmetics	as such (substance itself)	<p>Process category (PROC):</p> <p>PROC 1: Use in closed process, no likelihood of exposure</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
		in a mixture	<p>PROC 2: Use in closed, continuous process with occasional controlled exposure PROC 3: Use in closed batch process (synthesis or formulation) PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 13: Treatment of articles by dipping and pouring PROC 14: Production of preparations or articles by tableting, compression, extrusion, pelletisation PROC 15: Use as laboratory reagent</p> <p>Market sector by type of chemical product: PC 28: Perfumes, fragrances PC 35: Washing and cleaning products (including solvent based products) PC 39: Cosmetics, personal care products</p> <p>Environmental release category (ERC): ERC 2: Formulation of preparations ERC 5: Industrial use resulting in inclusion into or onto a matrix</p> <p>Sector of end use (SU): SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys)</p> <p>Subsequent service life relevant for that use?: yes</p>
71	ZnO use as additive to dentistry products	as such (substance itself)	<p>Process category (PROC): PROC 1: Use in closed process, no likelihood of exposure PROC 2: Use in closed, continuous process with occasional controlled exposure PROC 3: Use in closed batch process (synthesis or formulation) PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 13: Treatment of articles by dipping and pouring PROC 14: Production of preparations or articles by tableting, compression, extrusion, pelletisation</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>PROC 15: Use as laboratory reagent</p> <p>Market sector by type of chemical product:</p> <p>PC 29: Pharmaceuticals PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents PC 21: Laboratory chemicals</p> <p>Environmental release category (ERC):</p> <p>ERC 2: Formulation of preparations ERC 3: Formulation in materials</p> <p>Sector of end use (SU):</p> <p>SU 9: Manufacture of fine chemicals SU 20: Health services SU 0: Other: Nace C32.5:Manufacture of medical and dental instruments and supplies</p> <p>Subsequent service life relevant for that use?: yes</p>
72	additive in formulation of pharmaceutical or veterinary product	as such (substance itself)	<p>Process category (PROC):</p> <p>PROC 1: Use in closed process, no likelihood of exposure PROC 2: Use in closed, continuous process with occasional controlled exposure PROC 3: Use in closed batch process (synthesis or formulation) PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 13: Treatment of articles by dipping and pouring PROC 14: Production of preparations or articles by tableting, compression, extrusion, pelletisation PROC 15: Use as laboratory reagent</p> <p>Market sector by type of chemical product:</p> <p>PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents PC 21: Laboratory chemicals PC 29: Pharmaceuticals</p> <p>Environmental release category (ERC):</p> <p>ERC 2: Formulation of preparations ERC 5: Industrial use resulting in inclusion into or onto a matrix</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>Sector of end use (SU): SU 20: Health services SU 9: Manufacture of fine chemicals SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys)</p> <p>Subsequent service life relevant for that use?: yes</p>
75	Substrate preparation: sanding of surfaces between application of coatings	in a mixture	<p>Process category (PROC): PROC 24: High (mechanical) energy work-up of substances bound in materials and/or articles</p> <p>Environmental release category (ERC): ERC 5: Industrial use resulting in inclusion into or onto a matrix</p> <p>Market sector by type of chemical product: PC 9a: Coatings and paints, thinners, paint removes PC 9b: Fillers, putties, plasters, modelling clay</p> <p>Subsequent service life relevant for that use?: no</p>

Uses by professional workers

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
13	Laboratory reagent	as such (substance itself)	<p>Process category (PROC):</p> <p>PROC 1: Use in closed process, no likelihood of exposure PROC 2: Use in closed, continuous process with occasional controlled exposure PROC 3: Use in closed batch process (synthesis or formulation) PROC 4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 15: Use as laboratory reagent</p> <p>Market sector by type of chemical product:</p> <p>PC 19: Intermediate PC 21: Laboratory chemicals PC 28: Perfumes, fragrances PC 39: Cosmetics, personal care products</p> <p>Environmental release category (ERC):</p> <p>ERC 1: Manufacture of substances ERC 2: Formulation of preparations ERC 8a: Wide dispersive indoor use of processing aids in open systems ERC 8b: Wide dispersive indoor use of reactive substances in open systems ERC 8d: Wide dispersive outdoor use of processing aids in open systems</p> <p>Sector of end use (SU):</p> <p>SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys) SU 24: Scientific research and development</p> <p>Subsequent service life relevant for that use?: yes</p>
19	Use of ZnO-containing paints & coatings	in a mixture	<p>Process category (PROC):</p> <p>PROC 4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 7: Industrial spraying PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line,</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>including weighing) PROC 10: Roller application or brushing PROC 11: Non industrial spraying PROC 13: Treatment of articles by dipping and pouring PROC 19: Hand-mixing with intimate contact and only PPE available.</p> <p>Market sector by type of chemical product:</p> <p>PC 1: Adhesives, sealants PC 9a: Coatings and paints, thinners, paint removes PC 9b: Fillers, putties, plasters, modelling clay PC 9c: Finger paints PC 14: Metal surface treatment products, including galvanic and electroplating products PC 15: Non-metal-surface treatment products PC 18: Ink and toners</p> <p>Environmental release category (ERC):</p> <p>ERC 8a: Wide dispersive indoor use of processing aids in open systems ERC 8d: Wide dispersive outdoor use of processing aids in open systems ERC 10a: Wide dispersive outdoor use of long-life articles and materials with low release ERC 11a: Wide dispersive indoor use of long-life articles and materials with low release</p> <p>Sector of end use (SU):</p> <p>SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys)</p> <p>Subsequent service life relevant for that use?: yes</p> <p>Article category related to subsequent service life (AC):</p> <p>AC 0: Other:coatings for art and creative items</p>
20	Artists supply: Use of ZnO-containing paints & coatings	in a mixture	<p>Process category (PROC):</p> <p>PROC 4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 10: Roller application or brushing PROC 11: Non industrial spraying PROC 13: Treatment of articles by dipping and pouring PROC 19: Hand-mixing with intimate contact and only PPE available.</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>Market sector by type of chemical product:</p> <p>PC 1: Adhesives, sealants PC 9a: Coatings and paints, thinners, paint removes PC 9b: Fillers, putties, plasters, modelling clay PC 9c: Finger paints PC 14: Metal surface treatment products, including galvanic and electroplating products PC 15: Non-metal-surface treatment products PC 18: Ink and toners PC 21: Laboratory chemicals</p> <p>Environmental release category (ERC):</p> <p>ERC 8a: Wide dispersive indoor use of processing aids in open systems ERC 8d: Wide dispersive outdoor use of processing aids in open systems ERC 10a: Wide dispersive outdoor use of long-life articles and materials with low release ERC 11a: Wide dispersive indoor use of long-life articles and materials with low release</p> <p>Sector of end use (SU):</p> <p>SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys)</p> <p>Subsequent service life relevant for that use?: yes</p> <p>Article category related to subsequent service life (AC):</p> <p>AC 0: Other:coatings for art and creative items</p>
22	Use of ZnO-containing paper coatings	in a mixture	<p>Process category (PROC):</p> <p>PROC 4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 6: Calendering operations PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 10: Roller application or brushing PROC 13: Treatment of articles by dipping and pouring PROC 19: Hand-mixing with intimate contact and only PPE available.</p> <p>Market sector by type of chemical product:</p> <p>PC 9a: Coatings and paints, thinners, paint removes</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>PC 15: Non-metal-surface treatment products PC 18: Ink and toners PC 26: Paper and board dye, finishing and impregnation products: including bleaches and other processing aids</p> <p>Environmental release category (ERC):</p> <p>ERC 8a: Wide dispersive indoor use of processing aids in open systems ERC 8d: Wide dispersive outdoor use of processing aids in open systems ERC 10a: Wide dispersive outdoor use of long-life articles and materials with low release ERC 11a: Wide dispersive indoor use of long-life articles and materials with low release</p> <p>Sector of end use (SU):</p> <p>SU 6b: Manufacture of pulp, paper and paper products SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys)</p> <p>Subsequent service life relevant for that use?: yes</p> <p>Article category related to subsequent service life (AC):</p> <p>AC 0: Other:coatings for art and creative items AC 8: Paper articles</p>
24	Use of ZnO-containing textile & leather coatings	in a mixture	<p>Process category (PROC):</p> <p>PROC 4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 6: Calendering operations PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 10: Roller application or brushing PROC 13: Treatment of articles by dipping and pouring PROC 19: Hand-mixing with intimate contact and only PPE available.</p> <p>Market sector by type of chemical product:</p> <p>PC 9a: Coatings and paints, thinners, paint removes PC 15: Non-metal-surface treatment products PC 23: Leather tanning, dye, finishing, impregnation and care products PC 34: Textile dyes, finishing and impregnating products; including bleaches and other processing aids</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>Environmental release category (ERC):</p> <p>ERC 8a: Wide dispersive indoor use of processing aids in open systems ERC 8d: Wide dispersive outdoor use of processing aids in open systems ERC 10a: Wide dispersive outdoor use of long-life articles and materials with low release ERC 11a: Wide dispersive indoor use of long-life articles and materials with low release</p> <p>Sector of end use (SU):</p> <p>SU 5: Manufacture of textiles, leather, fur SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys)</p> <p>Subsequent service life relevant for that use?: yes</p> <p>Article category related to subsequent service life (AC):</p> <p>AC 6: Leather articles AC 5: Fabrics, textiles and apparel</p>
27	Use of ZnO-containing glazes and glassy thin film coatings	in a mixture	<p>Process category (PROC):</p> <p>PROC 10: Roller application or brushing PROC 11: Non industrial spraying PROC 14: Production of preparations or articles by tableting, compression, extrusion, pelletisation PROC 26: Handling of solid inorganic substances at ambient temperature</p> <p>Market sector by type of chemical product:</p> <p>PC 9a: Coatings and paints, thinners, paint removes PC 19: Intermediate PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents PC 0: Other: UCN G15000: glazing materials, enamels, ...</p> <p>Environmental release category (ERC):</p> <p>ERC 11a: Wide dispersive indoor use of long-life articles and materials with low release</p> <p>Sector of end use (SU):</p> <p>SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys) SU 13: Manufacture of other non-metallic mineral products, e.g. plasters, cement SU 0: Other:Nace: F43.3.4 - Painting and glazing</p> <p>Subsequent service life relevant for that use?: yes</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>Article category related to subsequent service life (AC):</p> <p>AC 4: Stone, plaster, cement, glass and ceramic articles</p>
29	Use of ZnO-containing friction agents: Brake pads	in a mixture	<p>Process category (PROC):</p> <p>PROC 14: Production of preparations or articles by tableting, compression, extrusion, pelletisation PROC 21: Low energy manipulation of substances bound in materials and/or articles</p> <p>Market sector by type of chemical product:</p> <p>PC 0: Other: UCN F40000: Friction agents - (e.g. brake pads)</p> <p>Environmental release category (ERC):</p> <p>ERC 10a: Wide dispersive outdoor use of long-life articles and materials with low release ERC 10b: Wide dispersive outdoor use of long-life articles and materials with high or intended release (including abrasive processing) ERC 12a: Industrial processing of articles with abrasive techniques (low release)</p> <p>Sector of end use (SU):</p> <p>SU 17: General manufacturing, e.g. machinery, equipment, vehicles, other transport equipment</p> <p>Subsequent service life relevant for that use?: yes</p> <p>Article category related to subsequent service life (AC):</p> <p>AC 1: Vehicles AC 0: Other:TARIC 6813 81 brake linings and pads</p>
32	Use of ZnO-containing glass & ceramics in dinnerware	in a mixture	<p>Process category (PROC):</p> <p>PROC 14: Production of preparations or articles by tableting, compression, extrusion, pelletisation PROC 26: Handling of solid inorganic substances at ambient temperature</p> <p>Market sector by type of chemical product:</p> <p>PC 19: Intermediate PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents</p> <p>Environmental release category (ERC):</p> <p>ERC 5: Industrial use resulting in inclusion into or onto a matrix ERC 11a: Wide dispersive indoor use of long-life articles and materials with low release</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>Sector of end use (SU):</p> <p>SU 13: Manufacture of other non-metallic mineral products, e.g. plasters, cement SU 0: Other:Nace C23.4: Manufacture of other porcelain and ceramic products</p> <p>Subsequent service life relevant for that use?: yes</p> <p>Article category related to subsequent service life (AC):</p> <p>AC 4: Stone, plaster, cement, glass and ceramic articles AC 0: Other:TARIC 6911: tableware, kitchenware, household products in porcelain or china</p>
33	Use of ZnO-containing glass in displays	in a mixture	<p>Process category (PROC):</p> <p>PROC 14: Production of preparations or articles by tableting, compression, extrusion, pelletisation PROC 26: Handling of solid inorganic substances at ambient temperature</p> <p>Market sector by type of chemical product:</p> <p>PC 19: Intermediate PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents</p> <p>Environmental release category (ERC):</p> <p>ERC 5: Industrial use resulting in inclusion into or onto a matrix ERC 11a: Wide dispersive indoor use of long-life articles and materials with low release</p> <p>Sector of end use (SU):</p> <p>SU 16: Manufacture of computer, electronic and optical products, electrical equipment SU 13: Manufacture of other non-metallic mineral products, e.g. plasters, cement SU 0: Other:Nace C23.1: Manufacture of glass and glass products</p> <p>Subsequent service life relevant for that use?: yes</p> <p>Article category related to subsequent service life (AC):</p> <p>AC 2: Machinery, mechanical appliances, electrical/electronic articles AC 4: Stone, plaster, cement, glass and ceramic articles</p>
34	Use of ZnO-containing glassy thin film coatings	in a mixture	<p>Process category (PROC):</p> <p>PROC 7: Industrial spraying PROC 10: Roller application or brushing PROC 14: Production of preparations or articles by tableting, compression, extrusion, pelletisation</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>PROC 26: Handling of solid inorganic substances at ambient temperature</p> <p>Market sector by type of chemical product: PC 9a: Coatings and paints, thinners, paint removes PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents PC 33: Semiconductors</p> <p>Environmental release category (ERC): ERC 11a: Wide dispersive indoor use of long-life articles and materials with low release</p> <p>Sector of end use (SU): SU 13: Manufacture of other non-metallic mineral products, e.g. plasters, cement SU 0: Other:Nace C23.1: Manufacture of other porcelain and ceramic products</p> <p>Subsequent service life relevant for that use?: yes</p> <p>Article category related to subsequent service life (AC): AC 2: Machinery, mechanical appliances, electrical/electronic articles AC 4: Stone, plaster, cement, glass and ceramic articles</p>
41	Use of ZnO-containing rubber for tyres	in a mixture	<p>Process category (PROC): PROC 14: Production of preparations or articles by tableting, compression, extrusion, pelletisation PROC 24: High (mechanical) energy work-up of substances bound in materials and/or articles</p> <p>Market sector by type of chemical product: PC 32: Polymer preparations and compounds</p> <p>Environmental release category (ERC): ERC 10a: Wide dispersive outdoor use of long-life articles and materials with low release ERC 10b: Wide dispersive outdoor use of long-life articles and materials with high or intended release (including abrasive processing) ERC 12a: Industrial processing of articles with abrasive techniques (low release)</p> <p>Sector of end use (SU): SU 11: Manufacture of rubber products</p> <p>Subsequent service life relevant for that use?: yes</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>Article category related to subsequent service life (AC):</p> <p>AC 10: Rubber articles AC 1: Vehicles</p>
42	Use of ZnO-containing rubber and other resins for medical devices and applications	in a mixture	<p>Process category (PROC):</p> <p>PROC 1: Use in closed process, no likelihood of exposure PROC 13: Treatment of articles by dipping and pouring PROC 15: Use as laboratory reagent</p> <p>Market sector by type of chemical product:</p> <p>PC 32: Polymer preparations and compounds</p> <p>Environmental release category (ERC):</p> <p>ERC 8a: Wide dispersive indoor use of processing aids in open systems</p> <p>Sector of end use (SU):</p> <p>SU 20: Health services</p> <p>Subsequent service life relevant for that use?: yes</p> <p>Article category related to subsequent service life (AC):</p> <p>AC 10: Rubber articles</p>
44	Use of ZnO-containing polymers for floor, wall coverings and similar preparations	in a mixture	<p>Process category (PROC):</p> <p>PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 21: Low energy manipulation of substances bound in materials and/or articles</p> <p>Market sector by type of chemical product:</p> <p>PC 32: Polymer preparations and compounds</p> <p>Environmental release category (ERC):</p> <p>ERC 8c: Wide dispersive indoor use resulting in inclusion into or onto a matrix ERC 11a: Wide dispersive indoor use of long-life articles and materials with low release</p> <p>Sector of end use (SU):</p> <p>SU 12: Manufacture of plastics products, including compounding and conversion SU 19: Building and construction work</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>Subsequent service life relevant for that use?: yes</p> <p>Article category related to subsequent service life (AC):</p> <p>AC 5: Fabrics, textiles and apparel AC 13: Plastic articles</p>
45	Use of ZnO-containing polymers for cable protecting & isolating coatings	in a mixture	<p>Process category (PROC):</p> <p>PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 13: Treatment of articles by dipping and pouring PROC 14: Production of preparations or articles by tableting, compression, extrusion, pelletisation PROC 21: Low energy manipulation of substances bound in materials and/or articles</p> <p>Market sector by type of chemical product:</p> <p>PC 32: Polymer preparations and compounds</p> <p>Environmental release category (ERC):</p> <p>ERC 10a: Wide dispersive outdoor use of long-life articles and materials with low release ERC 11a: Wide dispersive indoor use of long-life articles and materials with low release</p> <p>Sector of end use (SU):</p> <p>SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys) SU 12: Manufacture of plastics products, including compounding and conversion SU 19: Building and construction work</p> <p>Subsequent service life relevant for that use?: yes</p> <p>Article category related to subsequent service life (AC):</p> <p>AC 1: Vehicles AC 3: Electrical batteries and accumulators AC 13: Plastic articles</p>
46	Use of ZnO-containing polymers for tube &sheet articles	in a mixture	<p>Process category (PROC):</p> <p>PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 13: Treatment of articles by dipping and pouring PROC 14: Production of preparations or articles by tableting, compression, extrusion, pelletisation</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>PROC 21: Low energy manipulation of substances bound in materials and/or articles</p> <p>Market sector by type of chemical product: PC 32: Polymer preparations and compounds</p> <p>Environmental release category (ERC): ERC 10a: Wide dispersive outdoor use of long-life articles and materials with low release ERC 11a: Wide dispersive indoor use of long-life articles and materials with low release</p> <p>Sector of end use (SU): SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys) SU 12: Manufacture of plastics products, including compounding and conversion SU 19: Building and construction work</p> <p>Subsequent service life relevant for that use?: yes</p> <p>Article category related to subsequent service life (AC): AC 1: Vehicles AC 3: Electrical batteries and accumulators AC 13: Plastic articles</p>
47	Use of ZnO-containing polymers for molded articles	in a mixture	<p>Process category (PROC): PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 13: Treatment of articles by dipping and pouring PROC 14: Production of preparations or articles by tableting, compression, extrusion, pelletisation PROC 21: Low energy manipulation of substances bound in materials and/or articles PROC 24: High (mechanical) energy work-up of substances bound in materials and/or articles</p> <p>Market sector by type of chemical product: PC 32: Polymer preparations and compounds</p> <p>Environmental release category (ERC): ERC 10a: Wide dispersive outdoor use of long-life articles and materials with low release ERC 11a: Wide dispersive indoor use of long-life articles and materials with low release</p> <p>Sector of end use (SU): SU 1: Agriculture, forestry and fishing</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys) SU 12: Manufacture of plastics products, including compounding and conversion SU 17: General manufacturing, e.g. machinery, equipment, vehicles, other transport equipment SU 19: Building and construction work</p> <p>Subsequent service life relevant for that use?: yes</p> <p>Article category related to subsequent service life (AC):</p> <p>AC 1: Vehicles AC 3: Electrical batteries and accumulators AC 13: Plastic articles</p>
48	Use of ZnO-containing plastic thin films coatings	in a mixture	<p>Process category (PROC):</p> <p>PROC 1: Use in closed process, no likelihood of exposure PROC 13: Treatment of articles by dipping and pouring</p> <p>Market sector by type of chemical product:</p> <p>PC 32: Polymer preparations and compounds PC 33: Semiconductors</p> <p>Environmental release category (ERC):</p> <p>ERC 10a: Wide dispersive outdoor use of long-life articles and materials with low release ERC 11a: Wide dispersive indoor use of long-life articles and materials with low release</p> <p>Sector of end use (SU):</p> <p>SU 4: Manufacture of food products SU 12: Manufacture of plastics products, including compounding and conversion</p> <p>Subsequent service life relevant for that use?: yes</p> <p>Article category related to subsequent service life (AC):</p> <p>AC 1: Vehicles AC 2: Machinery, mechanical appliances, electrical/electronic articles AC 3: Electrical batteries and accumulators AC 5: Fabrics, textiles and apparel AC 13: Plastic articles</p>
50	Use of ZnO-containing Sealants / Adhesives / Mastics	in a mixture	<p>Process category (PROC):</p> <p>PROC 7: Industrial spraying</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>PROC 8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities</p> <p>PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities</p> <p>PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)</p> <p>PROC 11: Non industrial spraying</p> <p>PROC 13: Treatment of articles by dipping and pouring</p> <p>PROC 14: Production of preparations or articles by tableting, compression, extrusion, pelletisation</p> <p>PROC 17: Lubrication at high energy conditions and in partly open process</p> <p>PROC 19: Hand-mixing with intimate contact and only PPE available.</p> <p>PROC 21: Low energy manipulation of substances bound in materials and/or articles</p> <p>Market sector by type of chemical product:</p> <p>PC 1: Adhesives, sealants</p> <p>PC 9a: Coatings and paints, thinners, paint removes</p> <p>PC 9b: Fillers, putties, plasters, modelling clay</p> <p>PC 9c: Finger paints</p> <p>PC 14: Metal surface treatment products, including galvanic and electroplating products</p> <p>PC 19: Intermediate</p> <p>PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents</p> <p>PC 24: Lubricants, greases, release products</p> <p>PC 32: Polymer preparations and compounds</p> <p>Environmental release category (ERC):</p> <p>ERC 8a: Wide dispersive indoor use of processing aids in open systems</p> <p>ERC 8c: Wide dispersive indoor use resulting in inclusion into or onto a matrix</p> <p>ERC 8d: Wide dispersive outdoor use of processing aids in open systems</p> <p>ERC 8f: Wide dispersive outdoor use resulting in inclusion into or onto a matrix</p> <p>Sector of end use (SU):</p> <p>SU 5: Manufacture of textiles, leather, fur</p> <p>SU 6a: Manufacture of wood and wood products</p> <p>SU 6b: Manufacture of pulp, paper and paper products</p> <p>SU 11: Manufacture of rubber products</p> <p>SU 12: Manufacture of plastics products, including compounding and conversion</p> <p>SU 13: Manufacture of other non-metallic mineral products, e.g. plasters, cement</p> <p>SU 15: Manufacture of fabricated metal products, except machinery and equipment</p> <p>SU 19: Building and construction work</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>Subsequent service life relevant for that use?: yes</p> <p>Article category related to subsequent service life (AC):</p> <p>AC 1: Vehicles AC 2: Machinery, mechanical appliances, electrical/electronic articles AC 7: Metal articles AC 11: Wood articles</p>
52	Use of ZnO-containing Lubricants / Grease / Metal working fluids	in a mixture	<p>Process category (PROC):</p> <p>PROC 7: Industrial spraying PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 10: Roller application or brushing PROC 11: Non industrial spraying PROC 13: Treatment of articles by dipping and pouring PROC 14: Production of preparations or articles by tableting, compression, extrusion, pelletisation PROC 17: Lubrication at high energy conditions and in partly open process PROC 19: Hand-mixing with intimate contact and only PPE available. PROC 21: Low energy manipulation of substances bound in materials and/or articles</p> <p>Market sector by type of chemical product:</p> <p>PC 14: Metal surface treatment products, including galvanic and electroplating products PC 24: Lubricants, greases, release products PC 25: Metal working fluids PC 32: Polymer preparations and compounds</p> <p>Environmental release category (ERC):</p> <p>ERC 8a: Wide dispersive indoor use of processing aids in open systems ERC 8c: Wide dispersive indoor use resulting in inclusion into or onto a matrix ERC 8d: Wide dispersive outdoor use of processing aids in open systems ERC 8f: Wide dispersive outdoor use resulting in inclusion into or onto a matrix</p> <p>Sector of end use (SU):</p> <p>SU 17: General manufacturing, e.g. machinery, equipment, vehicles, other transport equipment SU 18: Manufacture of furniture</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>Subsequent service life relevant for that use?: yes</p> <p>Article category related to subsequent service life (AC):</p> <p>AC 1: Vehicles AC 2: Machinery, mechanical appliances, electrical/electronic articles AC 7: Metal articles AC 11: Wood articles</p>
54	Use of ZnO-containing Polishes/ wax blends	in a mixture	<p>Process category (PROC):</p> <p>PROC 7: Industrial spraying PROC 8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 10: Roller application or brushing PROC 11: Non industrial spraying PROC 13: Treatment of articles by dipping and pouring PROC 14: Production of preparations or articles by tableting, compression, extrusion, pelletisation PROC 19: Hand-mixing with intimate contact and only PPE available. PROC 21: Low energy manipulation of substances bound in materials and/or articles</p> <p>Market sector by type of chemical product:</p> <p>PC 9a: Coatings and paints, thinners, paint removes PC 9b: Fillers, putties, plasters, modelling clay PC 9c: Finger paints PC 14: Metal surface treatment products, including galvanic and electroplating products PC 25: Metal working fluids PC 31: Polishes and wax blends</p> <p>Environmental release category (ERC):</p> <p>ERC 8a: Wide dispersive indoor use of processing aids in open systems ERC 8c: Wide dispersive indoor use resulting in inclusion into or onto a matrix ERC 8d: Wide dispersive outdoor use of processing aids in open systems ERC 8f: Wide dispersive outdoor use resulting in inclusion into or onto a matrix</p> <p>Sector of end use (SU):</p> <p>SU 9: Manufacture of fine chemicals</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>SU 18: Manufacture of furniture</p> <p>Subsequent service life relevant for that use?: yes</p> <p>Article category related to subsequent service life (AC):</p> <p>AC 1: Vehicles AC 2: Machinery, mechanical appliances, electrical/electronic articles AC 7: Metal articles AC 11: Wood articles</p>
58	Use of ZnO-containing de-icing products	in a mixture	<p>Process category (PROC):</p> <p>PROC 7: Industrial spraying PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 10: Roller application or brushing PROC 11: Non industrial spraying PROC 13: Treatment of articles by dipping and pouring PROC 14: Production of preparations or articles by tableting, compression, extrusion, pelletisation PROC 19: Hand-mixing with intimate contact and only PPE available. PROC 21: Low energy manipulation of substances bound in materials and/or articles</p> <p>Market sector by type of chemical product:</p> <p>PC 4: Anti-freeze and de-icing products PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents PC 35: Washing and cleaning products (including solvent based products)</p> <p>Environmental release category (ERC):</p> <p>ERC 8a: Wide dispersive indoor use of processing aids in open systems ERC 10a: Wide dispersive outdoor use of long-life articles and materials with low release</p> <p>Sector of end use (SU):</p> <p>SU 9: Manufacture of fine chemicals SU 18: Manufacture of furniture</p> <p>Subsequent service life relevant for that use?: yes</p>
60	Use of ZnO-containing pyrotechnic products	in a mixture	<p>Process category (PROC):</p> <p>PROC 23: Open processing and transfer operations with minerals/metals at elevated</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>temperature PROC 24: High (mechanical) energy work-up of substances bound in materials and/or articles</p> <p>Market sector by type of chemical product: PC 9b: Fillers, putties, plasters, modelling clay PC 11: Explosives</p> <p>Environmental release category (ERC): ERC 8e: Wide dispersive outdoor use of reactive substances in open systems ERC 10a: Wide dispersive outdoor use of long-life articles and materials with low release</p> <p>Sector of end use (SU): SU 9: Manufacture of fine chemicals SU 0: Other:Nace C20.5.1: Manufacture of explosives</p> <p>Subsequent service life relevant for that use?: yes</p>
64	use of ZnO containg biocidal products	in a mixture	<p>Process category (PROC): PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 10: Roller application or brushing PROC 11: Non industrial spraying</p> <p>Market sector by type of chemical product: PC 8: Biocidal products (e.g. disinfectants, pest control) PC 37: Water treatment chemicals</p> <p>Environmental release category (ERC): ERC 8d: Wide dispersive outdoor use of processing aids in open systems ERC 8a: Wide dispersive indoor use of processing aids in open systems</p> <p>Sector of end use (SU): SU 1: Agriculture, forestry and fishing SU 0: Other:C20.2 - Manufacture of pesticides and other agrochemical products</p> <p>Subsequent service life relevant for that use?: yes</p>
66	Use of ZnO containing cleaning products	in a mixture	<p>Process category (PROC):</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 10: Roller application or brushing PROC 11: Non industrial spraying PROC 13: Treatment of articles by dipping and pouring</p> <p>Market sector by type of chemical product: PC 8: Biocidal products (e.g. disinfectants, pest control) PC 35: Washing and cleaning products (including solvent based products)</p> <p>Environmental release category (ERC): ERC 8a: Wide dispersive indoor use of processing aids in open systems ERC 8d: Wide dispersive outdoor use of processing aids in open systems</p> <p>Sector of end use (SU): SU 9: Manufacture of fine chemicals</p> <p>Subsequent service life relevant for that use?: yes</p>
68	Use of ZnO-containing fertilizer's formulations	in a mixture	<p>Process category (PROC): PROC 2: Use in closed, continuous process with occasional controlled exposure PROC 7: Industrial spraying PROC 8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 10: Roller application or brushing PROC 11: Non industrial spraying PROC 13: Treatment of articles by dipping and pouring PROC 19: Hand-mixing with intimate contact and only PPE available. PROC 26: Handling of solid inorganic substances at ambient temperature</p> <p>Market sector by type of chemical product: PC 9b: Fillers, putties, plasters, modelling clay PC 12: Fertilisers PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>Environmental release category (ERC):</p> <p>ERC 8a: Wide dispersive indoor use of processing aids in open systems ERC 8b: Wide dispersive indoor use of reactive substances in open systems ERC 8d: Wide dispersive outdoor use of processing aids in open systems ERC 8e: Wide dispersive outdoor use of reactive substances in open systems ERC 9b: Wide dispersive outdoor use of substances in closed systems ERC 10b: Wide dispersive outdoor use of long-life articles and materials with high or intended release (including abrasive processing)</p> <p>Sector of end use (SU):</p> <p>SU 1: Agriculture, forestry and fishing SU 9: Manufacture of fine chemicals</p> <p>Subsequent service life relevant for that use?: yes</p>
70	Use of cosmetics	in a mixture	<p>Process category (PROC):</p> <p>PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 10: Roller application or brushing PROC 11: Non industrial spraying</p> <p>Market sector by type of chemical product:</p> <p>PC 28: Perfumes, fragrances PC 35: Washing and cleaning products (including solvent based products) PC 39: Cosmetics, personal care products</p> <p>Environmental release category (ERC):</p> <p>ERC 8a: Wide dispersive indoor use of processing aids in open systems ERC 8d: Wide dispersive outdoor use of processing aids in open systems</p> <p>Sector of end use (SU):</p> <p>SU 9: Manufacture of fine chemicals</p> <p>Subsequent service life relevant for that use?: yes</p>
72	Use of Pharma / veterinary products	in a mixture	<p>Process category (PROC):</p> <p>PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large</p>

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 10: Roller application or brushing PROC 11: Non industrial spraying</p> <p>Market sector by type of chemical product: PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents PC 21: Laboratory chemicals PC 29: Pharmaceuticals</p> <p>Environmental release category (ERC): ERC 8a: Wide dispersive indoor use of processing aids in open systems</p> <p>Sector of end use (SU): SU 20: Health services</p> <p>Subsequent service life relevant for that use?: yes</p>
75	Substrate preparation: sanding of surfaces between application of coatings	in a mixture	<p>Process category (PROC): PROC 24: High (mechanical) energy work-up of substances bound in materials and/or articles</p> <p>Environmental release category (ERC): ERC 8c: Wide dispersive indoor use resulting in inclusion into or onto a matrix</p> <p>Market sector by type of chemical product: PC 9a: Coatings and paints, thinners, paint removes PC 9b: Fillers, putties, plasters, modelling clay</p> <p>Subsequent service life relevant for that use?: no</p>

Uses by consumers

IU number	Identified Use (IU) name	Use descriptors
20	Artists supply: Use of ZnO-containing paints & coatings	<p>Chemical product category (PC):</p> <ul style="list-style-type: none"> PC 1: Adhesives, sealants PC 9a: Coatings and paints, thinners, paint removes PC 9b: Fillers, putties, plasters, modelling clay PC 9c: Finger paints PC 14: Metal surface treatment products, including galvanic and electroplating products PC 15: Non-metal-surface treatment products PC 18: Ink and toners PC 21: Laboratory chemicals <p>Environmental release category (ERC):</p> <ul style="list-style-type: none"> ERC 8a: Wide dispersive indoor use of processing aids in open systems ERC 8d: Wide dispersive outdoor use of processing aids in open systems ERC 10a: Wide dispersive outdoor use of long-life articles and materials with low release ERC 11a: Wide dispersive indoor use of long-life articles and materials with low release <p>Subsequent service life relevant for that use?: yes</p> <p>Article category related to subsequent service life (AC):</p> <ul style="list-style-type: none"> AC 0: Other: coatings for art and creative items
48	Use of ZnO-containing plastic thin films coatings	<p>Chemical product category (PC):</p> <ul style="list-style-type: none"> PC 32: Polymer preparations and compounds PC 33: Semiconductors <p>Environmental release category (ERC):</p> <ul style="list-style-type: none"> ERC 10a: Wide dispersive outdoor use of long-life articles and materials with low release ERC 11a: Wide dispersive indoor use of long-life articles and materials with low release <p>Subsequent service life relevant for that use?: yes</p> <p>Article category related to subsequent service life (AC):</p> <ul style="list-style-type: none"> AC 1: Vehicles AC 2: Machinery, mechanical appliances, electrical/electronic articles AC 3: Electrical batteries and accumulators AC 5: Fabrics, textiles and apparel AC 13: Plastic articles
50	Use of ZnO-containing Sealants / Adhesives / Mastics	<p>Chemical product category (PC):</p> <ul style="list-style-type: none"> PC 1: Adhesives, sealants

IU number	Identified Use (IU) name	Use descriptors
		<p>PC 9a: Coatings and paints, thinners, paint removes PC 9b: Fillers, putties, plasters, modelling clay PC 9c: Finger paints PC 14: Metal surface treatment products, including galvanic and electroplating products PC 19: Intermediate PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents PC 24: Lubricants, greases, release products PC 32: Polymer preparations and compounds</p> <p>Environmental release category (ERC):</p> <p>ERC 8a: Wide dispersive indoor use of processing aids in open systems ERC 8c: Wide dispersive indoor use resulting in inclusion into or onto a matrix ERC 8d: Wide dispersive outdoor use of processing aids in open systems ERC 8f: Wide dispersive outdoor use resulting in inclusion into or onto a matrix</p> <p>Subsequent service life relevant for that use?: yes</p> <p>Article category related to subsequent service life (AC):</p> <p>AC 1: Vehicles AC 2: Machinery, mechanical appliances, electrical/electronic articles AC 7: Metal articles AC 11: Wood articles</p>
52	Use of ZnO-containing Lubricants / Grease / Metal working fluids	<p>Chemical product category (PC):</p> <p>PC 14: Metal surface treatment products, including galvanic and electroplating products PC 24: Lubricants, greases, release products PC 25: Metal working fluids PC 32: Polymer preparations and compounds</p> <p>Environmental release category (ERC):</p> <p>ERC 8a: Wide dispersive indoor use of processing aids in open systems ERC 8c: Wide dispersive indoor use resulting in inclusion into or onto a matrix ERC 8d: Wide dispersive outdoor use of processing aids in open systems ERC 8f: Wide dispersive outdoor use resulting in inclusion into or onto a matrix</p> <p>Subsequent service life relevant for that use?: yes</p> <p>Article category related to subsequent service life (AC):</p> <p>AC 1: Vehicles AC 2: Machinery, mechanical appliances, electrical/electronic articles AC 7: Metal articles AC 11: Wood articles</p>

IU number	Identified Use (IU) name	Use descriptors
54	Use of ZnO-containing Polishes / wax blends	<p>Chemical product category (PC):</p> <p>PC 9a: Coatings and paints, thinners, paint removes PC 9b: Fillers, putties, plasters, modelling clay PC 9c: Finger paints PC 14: Metal surface treatment products, including galvanic and electroplating products PC 25: Metal working fluids PC 31: Polishes and wax blends</p> <p>Environmental release category (ERC):</p> <p>ERC 8a: Wide dispersive indoor use of processing aids in open systems ERC 8c: Wide dispersive indoor use resulting in inclusion into or onto a matrix ERC 8d: Wide dispersive outdoor use of processing aids in open systems ERC 8f: Wide dispersive outdoor use resulting in inclusion into or onto a matrix</p> <p>Subsequent service life relevant for that use?: yes</p> <p>Article category related to subsequent service life (AC):</p> <p>AC 1: Vehicles AC 2: Machinery, mechanical appliances, electrical/electronic articles AC 7: Metal articles AC 11: Wood articles</p>
58	Use of ZnO-containing de-icing products	<p>Chemical product category (PC):</p> <p>PC 4: Anti-freeze and de-icing products PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents PC 35: Washing and cleaning products (including solvent based products)</p> <p>Environmental release category (ERC):</p> <p>ERC 8a: Wide dispersive indoor use of processing aids in open systems ERC 10a: Wide dispersive outdoor use of long-life articles and materials with low release</p> <p>Subsequent service life relevant for that use?: yes</p>
60	Use of ZnO-containing pyrotechnic products	<p>Chemical product category (PC):</p> <p>PC 9b: Fillers, putties, plasters, modelling clay PC 11: Explosives</p> <p>Environmental release category (ERC):</p> <p>ERC 8a: Wide dispersive indoor use of processing aids in open systems ERC 10a: Wide dispersive outdoor use of long-life articles and materials with low release</p> <p>Subsequent service life relevant for that use?: yes</p>

IU number	Identified Use (IU) name	Use descriptors
66	Use of ZnO-containing cleaning products	<p>Chemical product category (PC): PC 35: Washing and cleaning products (including solvent based products)</p> <p>Environmental release category (ERC): ERC 8a: Wide dispersive indoor use of processing aids in open systems</p> <p>Subsequent service life relevant for that use?: yes</p>
68	Use of ZnO-containing fertilizer's formulations	<p>Chemical product category (PC): PC 9b: Fillers, putties, plasters, modelling clay PC 12: Fertilisers PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents</p> <p>Environmental release category (ERC): ERC 8a: Wide dispersive indoor use of processing aids in open systems ERC 8b: Wide dispersive indoor use of reactive substances in open systems ERC 8d: Wide dispersive outdoor use of processing aids in open systems ERC 8e: Wide dispersive outdoor use of reactive substances in open systems ERC 9b: Wide dispersive outdoor use of substances in closed systems ERC 10b: Wide dispersive outdoor use of long-life articles and materials with high or intended release (including abrasive processing)</p> <p>Subsequent service life relevant for that use?: yes</p>
70	Use of cosmetics	<p>Chemical product category (PC): PC 28: Perfumes, fragrances PC 35: Washing and cleaning products (including solvent based products) PC 39: Cosmetics, personal care products</p> <p>Environmental release category (ERC): ERC 8a: Wide dispersive indoor use of processing aids in open systems ERC 8d: Wide dispersive outdoor use of processing aids in open systems</p> <p>Subsequent service life relevant for that use?: yes</p>
73	Use of Pharma / veterinary products	<p>Chemical product category (PC): PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents PC 21: Laboratory chemicals PC 29: Pharmaceuticals</p> <p>Environmental release category (ERC):</p>

IU number	Identified Use (IU) name	Use descriptors
		<p data-bbox="891 188 1659 220">ERC 8a: Wide dispersive indoor use of processing aids in open systems</p> <p data-bbox="860 245 1424 277">Subsequent service life relevant for that use?: yes</p>
74	Use of ZnO-containing antifouling paints	<p data-bbox="860 316 1359 347">Market sector by type of chemical product:</p> <p data-bbox="891 347 1447 379">PC 9a: Coatings and paints, thinners, paint removes</p> <p data-bbox="891 379 1393 411">PC 9b: Fillers, putties, plasters, modelling clay</p> <p data-bbox="860 437 1317 469">Environmental release category (ERC):</p> <p data-bbox="891 469 1711 501">ERC 8e: Wide dispersive outdoor use of reactive substances in open systems</p>