In table below, the generic exposure scenarios (GES) developed for CdS are summarised.

Generic exposure scenarios for cadmium sulphide

Number	Sector	Uses	Code
0	Cadmium sulphide production	Manufacture Substance	GES_{Cds} 0
1	Formulation step	Forrmulation general	GES_{Cds} 1
2	First tier applications	Manufacturing of other cadmium compounds	GES_{Cds} 2
3		Laboratory reagent	GES_{Cds} 3
4		As component for solid blends & matrices	GES_{Cds} 4
5		As component for production of dispersions, pastes and other viscous matrices	GES_{Cds} 5
6	Second tier applications	DU of CdS-containing solid preparations	GES_{Cds} 6
7		DU of CdS-containing liquid & pasty preparations	GES_{Cds} 7

Numerous uses were identified for CdS. 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 CdS and corresponding Generic Exposure Scenario (GES)

IU number	Identified Use (IU) name	GES code
1	Cadmium sulphide production - indirect	GESCdS 0
2	Cadmium sulphide production -Wet	GESCdS 0
6	Component for production of inorganic Cadmium compounds	GESCdS 2
7	Laboratory reagent	GESCdS 3
8	Cadmium production by pyrometallurgy	GESCdS 2
9	Component for production of organic Cadmium compounds	GESCdS 2
10	Component for production of Inorganic pigments	GESCdS 1, GESCdS 4
11	Additive for production of frits	GESCdS 1, GESCdS 4
12	Additive for production of glass	GESCdS 1, GESCdS 4
13	Additive in the manufacturing of electronic components	GESCdS 1, GESCdS 4
14	Use of CdS-containing catalysts	GESCdS 1, GESCdS 5
15	Component for production of PV modules	GESCdS 2, GESCdS 4

Uses by workers in industrial settings

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
1	Cadmium sulphide production - indirect	as such (substance itself)	**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 **Market sector by type of chemical product:** PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents **Environmental release category (ERC):** ERC 1: Manufacture of substances **Sector of end use (SU):** SU 8: Manufacture of bulk, large scale chemicals (including petroleum products) SU 9: Manufacture of fine chemicals **Subsequent service life relevant for that use?:** yes
6	Component for production of inorganic Cadmium compounds	as such (substance itself) in a mixture	**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

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			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 **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) **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) **Subsequent service life relevant for that use?:** yes
7	Laboratory reagent	as such (substance itself)	**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 15: Use as laboratory reagent **Market sector by type of chemical product:** PC 19: Intermediate PC 21: Laboratory chemicals PC 28: Perfumes, fragrances PC 39: Cosmetics, personal care products

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			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 6a: Industrial use resulting in manufacture of another substance (use of intermediates) ERC 6b: Industrial use of reactive processing aids ERC 8a: Wide dispersive indoor use of processing aids in open systems ERC 8d: Wide dispersive outdoor use of processing aids in open systems **Sector of end use (SU):** SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys) SU 24: Scientific research and development **Subsequent service life relevant for that use?:** yes
9	Component for production of organic Cadmium compounds	as such (substance itself) in a mixture	**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 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 **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 PC 24: Lubricants, greases, release products PC 29: Pharmaceuticals PC 39: Cosmetics, personal care products

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			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) **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) **Subsequent service life relevant for that use?:** yes
15	Component for production of PV modules	as such (substance itself) in a mixture	**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) **Market sector by type of chemical product:** PC 33: Semiconductors **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 **Sector of end use (SU):** SU 9: Manufacture of fine chemicals SU 16: Manufacture of computer, electronic and optical products, electrical equipment SU 23: Electricity, steam, gas water supply and sewage treatment SU 24: Scientific research and development **Subsequent service life relevant for that use?:** yes **Article category related to subsequent service life (AC):**

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			AC 3: Electrical batteries and accumulators
2	Cadmium sulphide production -Wet	as such (substance itself)	**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 **Market sector by type of chemical product:** PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents **Environmental release category (ERC):** ERC 1: Manufacture of substances **Sector of end use (SU):** SU 8: Manufacture of bulk, large scale chemicals (including petroleum products) SU 9: Manufacture of fine chemicals **Subsequent service life relevant for that use?:** yes
8	Cadmium production by pyrometallurgy	as such (substance itself)	**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 9: Transfer of substance or preparation into small containers (dedicated filling line, 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 **Market sector by type of chemical product:**

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			PC 7: Base metals and alloys **Environmental release category (ERC):** ERC 1: Manufacture of substances **Sector of end use (SU):** SU 14: Manufacture of basic metals, including alloys SU 0: Other: Nace C24.4.5: Other non-ferrous metal production , E38.3: Materials recovery **Subsequent service life relevant for that use?:** yes
10	Component for production of Inorganic pigments	in a mixture	**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 22: Potentially closed processing operations with minerals/metals at elevated temperature. Industrial setting **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 **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

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			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 **Subsequent service life relevant for that use?:** yes
11	Additive for production of frits	as such (substance itself) in a mixture	**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 13: Treatment of articles by dipping and pouring PROC 14: Production of preparations or articles by tabletting, compression, extrusion, 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 **Market sector by type of chemical product:** PC 19: Intermediate PC 0: Other: UCN R30100-R30200: Raw materials for synthesis and intermediate products/Raw materials for production of glass and ceramics **Environmental release category (ERC):** ERC 1: Manufacture of substances ERC 2: Formulation of preparations

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			ERC 3: Formulation in materials ERC 5: Industrial use resulting in inclusion into or onto a matrix **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 **Subsequent service life relevant for that use?:** yes **Article category related to subsequent service life (AC):** AC 3: Electrical batteries and accumulators AC 4: Stone, plaster, cement, glass and ceramic articles AC 0: Other: TARIC 8541 21 transistors other than photosensitive transistors
12	Additive for production of glass	as such (substance itself) in a mixture	**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 **Market sector by type of chemical product:** PC 19: Intermediate PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents **Environmental release category (ERC):** 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)

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			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 C23.1: Manufacture of glass and glass products **Subsequent service life relevant for that use?:** yes **Article category related to subsequent service life (AC):** AC 4: Stone, plaster, cement, glass and ceramic articles
13	Additive in the manufacturing of electronic components	as such (substance itself) in a mixture	**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 tabletting, 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 **Market sector by type of chemical product:** PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents **Environmental release category (ERC):** ERC 2: Formulation of preparations ERC 5: Industrial use resulting in inclusion into or onto a matrix **Sector of end use (SU):** SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys)

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			SU 13: Manufacture of other non-metallic mineral products, e.g. plasters, cement SU 0: Other: Nace C26.1.1: Manufacture of electronic components SU 16: Manufacture of computer, electronic and optical products, electrical equipment **Subsequent service life relevant for that use?:** yes **Article category related to subsequent service life (AC):** AC 4: Stone, plaster, cement, glass and ceramic articles AC 2: Machinery, mechanical appliances, electrical/electronic articles
14	Use of CdS-containing catalysts	in a mixture	**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 14: Production of preparations or articles by tabletting, compression, extrusion, pelletisation **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 **Environmental release category (ERC):** ERC 1: Manufacture of substances ERC 5: Industrial use resulting in inclusion into or onto a matrix 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)

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			ERC 6b: Industrial use of reactive processing aids **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) **Subsequent service life relevant for that use?:** yes

Uses by professional workers

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
7	Laboratory reagent	as such (substance itself)	**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 15: Use as laboratory reagent **Market sector by type of chemical product:** PC 19: Intermediate PC 21: Laboratory chemicals PC 28: Perfumes, fragrances PC 39: Cosmetics, personal care products **Environmental release category (ERC):** ERC 1: Manufacture of substances

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			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 ERC 8a: Wide dispersive indoor use of processing aids in open systems ERC 8d: Wide dispersive outdoor use of processing aids in open systems **Sector of end use (SU):** SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys) SU 24: Scientific research and development **Subsequent service life relevant for that use?:** yes