

EC number:
208-168-9

cadmium carbonate

CAS number:
513-78-0

In table below, the generic exposure scenarios (GES) developed for CdCO₃ are summarised.

Generic exposure scenarios for cadmium carbonate

Number	Sector	Uses	Code
0	Cadmium carbonate production	Manufacture Substance	GES _{CdCO3} 0
1	Formulation step	Formulation general	GES _{CdCO3} 1
2	First tier applications	Manufacturing of other cadmium compounds	GES _{CdCO3} 2
3		Laboratory reagent	GES _{CdCO3} 3
4		As component for solid blends & matrices	GES _{CdCO3} 4
5		As component for production of dispersions, pastes and other viscous matrices	GES _{CdCO3} 5
6	Second tier applications	DU of CdCO ₃ -containing solid preparations	GES _{CdCO3} 6
7		DU of CdCO ₃ -containing liquid & pasty preparations	GES _{CdCO3} 7
8		Outdoor DU of CdCO ₃ -containing preparations	GES _{CdCO3} 8

Numerous uses were identified for CdCO₃. 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 CdCO₃ and corresponding Generic Exposure Scenario (GES)

IU number	Identified Use (IU) name	GES code
1	Cadmium carbonate production -Wet	GES _{CdCO3} 0
5	Component for production of inorganic Cadmium compounds	GES _{CdCO3} 2
6	Laboratory reagent	GES _{CdCO3} 3
7	Component for production of organic Cadmium compounds	GES _{CdCO3} 2
8	Component for production of Inorganic pigments	GES _{CdCO3} 1, GES _{CdCO3} 4
9	Additive for production of glass	GES _{CdCO3} 1, GES _{CdCO3} 4
10	Component for polymer-matrices, plastics and related preparations	GES _{CdCO3} 1, GES _{CdCO3} 5
11	Use of CdCO ₃ -containing polymers for cable protecting & isolating coatings	GES _{CdCO3} 7
12	Use of CdCO ₃ -containing polymers for tube & sheet articles	GES _{CdCO3} 7
13	Use of CdCO ₃ -containing polymers for molded articles	GES _{CdCO3} 7
14	Use of CdCO ₃ -containing catalysts	GES _{CdCO3} 1, GES _{CdCO3} 5

Table 1. Uses by workers in industrial settings

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
1	Cadmium carbonate production -Wet	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, neutralization 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>
5	Component for production of inorganic Cadmium compounds	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 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</p>

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IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<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 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 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 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>
6	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</p>

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IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>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 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 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>
7	Component for production of organic Cadmium compounds	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 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</p>

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IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<p>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 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>
8	Component for production of Inorganic pigments	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 temperature. Industrial setting</p> <p>Market sector by type of chemical product:</p> <p>PC 9a: Coatings and paints, thinners, paint removers PC 9b: Fillers, putties, plasters, modelling clay PC 9c: Finger paints</p> <p>Environmental release category (ERC):</p> <p>ERC 1: Manufacture of substances</p>

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IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<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): 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</p> <p>Subsequent service life relevant for that use?: yes</p>
9	Additive 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> <p>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)</p> <p>Sector of end use (SU):</p>

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			<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: 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 4: Stone, plaster, cement, glass and ceramic articles</p>
10	Component for polymer-matrices, plastics and related preparations	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 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> <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 32: Polymer preparations and compounds PC 33: Semiconductors</p> <p>Environmental release category (ERC):</p> <p>ERC 1: Manufacture of substances ERC 3: Formulation in materials ERC 5: Industrial use resulting in inclusion into or onto a matrix</p>

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			<p>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 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 13: Plastic articles</p>
11	Use of CdCO ₃ -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>

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IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			Article category related to subsequent service life (AC): AC 1: Vehicles AC 3: Electrical batteries and accumulators AC 13: Plastic articles
12	Use of CdCO ₃ -containing polymers for tube & sheet articles	in a mixture	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 Market sector by type of chemical product: PC 32: Polymer preparations and compounds 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 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 Subsequent service life relevant for that use?: yes Article category related to subsequent service life (AC): AC 1: Vehicles AC 3: Electrical batteries and accumulators AC 13: Plastic articles
13	Use of CdCO ₃ -containing polymers for molded articles	in a mixture	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

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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 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 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): AC 1: Vehicles AC 3: Electrical batteries and accumulators AC 13: Plastic articles</p>
14	Use of CdCO ₃ -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 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>

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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</p> <p>Market sector by type of chemical product:</p> <p>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):</p> <p>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) 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) 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>

Table 2. Uses by professional workers

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
6	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 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 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys) SU 24: Scientific research and development</p>

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IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			Subsequent service life relevant for that use?: yes
11	Use of CdCO ₃ -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 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>
12	Use of CdCO ₃ -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>

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			<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>
13	Use of CdCO ₃ -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>

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IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			<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> <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>