Table 2.3. Uses at industrial sites

Table 2.5.	Uses at industrial sites
	Uses at industrial sites
IW-1	Use as an intermediate Further description of the use: Contributing activity/technique for the environment: - ERC6a: Use of intermediate Contributing activity/technique for the workers: - PROC 1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions - PROC 3: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment conditions - PROC 4: Chemical production where opportunity for exposure arises - PROC 5: Mixing or blending in batch processes - PROC 8b: Transfer of substance or mixture (charging and discharging) at dedicated facilities [EU REACH] - PROC 9: Transfer of substance or mixture into small containers (dedicated filling line, including weighing) - PROC 14: Tabletting, compression, extrusion, pelletisation, granulation - PROC 15: Use as laboratory reagent - 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 - PROC 26: Handling of solid inorganic substances at ambient temperature Product Category used: PC 19: Intermediate Sector of end use: SU 8: Manufacture of bulk, large scale chemicals (including petroleum products); SU 9: Manufacture of fine chemicals; SU 14: Manufacture of basic metals, including alloys Technical function of the substance: intermediate (precursor) Tonnage of substance for that use: tonnes/year Substance supplied to that use: as such; in a mixture
IW-3	Use of process catalysts Further description of the use: Contributing activity/technique for the environment: - ERC4: Use of non-reactive processing aid at industrial site (no inclusion into or onto article) Contributing activity/technique for the workers: - PROC 1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions - PROC 2: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions - PROC 3: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment conditions - PROC 8b: Transfer of substance or mixture (charging and discharging) at dedicated facilities [EU REACH] - PROC 9: Transfer of substance or mixture into small containers (dedicated filling line, including weighing) Product Category used: PC 3: Air care products; PC 0: Other: Sector of end use: SU 9: Manufacture of fine chemicals; SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys); SU 0: Other: Technical function of the substance: catalyst Tonnage of substance for that use: tonnes/year Substance supplied to that use: as such; in a mixture Subsequent service life relevant for that use: no
IW-3	Use of process catalysts Further description of the use:

Contributing activity/technique for the environment:

- ERC6b: Use of reactive processing aid at industrial site (no inclusion into or onto article) Contributing activity/technique for the workers :
 - $\hbox{- PROC 1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions}$
 - PROC 2: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
 - PROC 3: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment conditions
 - PROC 8b: Transfer of substance or mixture (charging and discharging) at dedicated facilities [EU REACH]
 - PROC 9: Transfer of substance or mixture into small containers (dedicated filling line, including weighing)

Product Category used: PC 3: Air care products; PC 0: Other:

Sector of end use: SU 9: Manufacture of fine chemicals; SU 10: Formulation [mixing] of

preparations and/or re-packaging (excluding alloys); SU 0: Other:

Technical function of the substance: catalyst Tonnage of substance for that use: tonnes/year Substance supplied to that use: as such; in a mixture Subsequent service life relevant for that use: no

IW-4 Production of environmental or automotive catalysts

Further description of the use:

Contributing activity/technique for the environment:

- ERC5: Use at industrial site leading to inclusion into/onto article

Contributing activity/technique for the workers:

- PROC 1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions
- PROC 2: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
- PROC 3: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment conditions
- PROC 4: Chemical production where opportunity for exposure arises
- PROC 8a: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
- PROC 8b: Transfer of substance or mixture (charging and discharging) at dedicated facilities [EU REACH]
- PROC 9: Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
- PROC 13: Treatment of articles by dipping and pouring
- PROC 14: Tabletting, compression, extrusion, pelletisation, granulation
- PROC 15: Use as laboratory reagent
- PROC 21: Low energy manipulation of substances bound in materials and/or articles
- PROC 26: Handling of solid inorganic substances at ambient temperature
- PROC 27a: Production of metal powders (hot processes)

Product Category used: PC 3: Air care products; PC 0: Other:

Sector of end use: SU 9: Manufacture of fine chemicals; SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys); SU 0: Other:

Technical function of the substance: catalyst

Tonnage of substance for that use: tonnes/year

Substance supplied to that use: as such; in a mixture

Subsequent service life relevant for that use: yes

Link to the subsequent service life: Service life of environmental or automotive catalysts in professional settings; Service life of environmental or automotive catalysts by consumers

IW-5 Use in metal surface treatment

Further description of the use:

Contributing activity/technique for the environment:

- ERC5: Use at industrial site leading to inclusion into/onto article

Contributing activity/technique for the workers:

- PROC 2: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
- PROC 8b: Transfer of substance or mixture (charging and discharging) at dedicated facilities $[EU\ REACH]$
- PROC 13: Treatment of articles by dipping and pouring
- PROC 21: Low energy manipulation of substances bound in materials and/or articles
- PROC 26: Handling of solid inorganic substances at ambient temperature

Product Category used: PC 14: Metal surface treatment products

Sector of end use: SU 15: Manufacture of fabricated metal products, except machinery and equipment; SU 24: Scientific research and development

Technical function of the substance: plating agents and metal surface treating agents

Tonnage of substance for that use: tonnes/year

Substance supplied to that use: as such; in a mixture

Subsequent service life relevant for that use: yes

Link to the subsequent service life: Service life of surface treated articles in professional settings; Service life of surface treated articles by consumers

IW-6 Reforming and reshaping of palladium metal

Further description of the use:

Contributing activity/technique for the environment:

- ERC5: Use at industrial site leading to inclusion into/onto article

Contributing activity/technique for the workers:

- PROC 1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions
- PROC 3: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment conditions
- PROC 4: Chemical production where opportunity for exposure arises
- PROC 5: Mixing or blending in batch processes
- PROC 6: Calendering operations
- PROC 8a: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
- PROC 8b: Transfer of substance or mixture (charging and discharging) at dedicated facilities [EU REACH]
- PROC 9: Transfer of substance or mixture 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: Tabletting, compression, extrusion, pelletisation, granulation
- 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
- PROC 23: Open processing and transfer operations with minerals/metals at elevated temperature $\,$
- PROC 24: High (mechanical) energy work-up of substances bound in materials and/or articles $\,$
- PROC 25: Other hot work operations with metals
- PROC 26: Handling of solid inorganic substances at ambient temperature
- $\hbox{\bf -PROC 27a: Production of metal powders (hot processes)}\\$
- PROC 27b: Production of metal powders (wet processes)

Product Category used: PC 1: Adhesives, sealants; PC 7: Base metals and alloys; PC 9a: Coatings and paints, thinners, paint removes; PC 14: Metal surface treatment products; PC 21: Laboratory chemicals; PC 33: Semiconductors; PC 38: Welding and soldering products, flux products; PC 0: Other:

Sector of end use: SU 14: Manufacture of basic metals, including alloys; SU 15: Manufacture of fabricated metal products, except machinery and equipment; SU 16: Manufacture of computer, electronic and optical products, electrical equipment; SU 17: General manufacturing, e.g. machinery, equipment, vehicles, other transport equipment; SU 20: Health services; SU 24:

Scientific research and development; SU 0: Other:

Technical function of the substance: no technical function

Tonnage of substance for that use: tonnes/year Substance supplied to that use: as such; in a mixture Subsequent service life relevant for that use: yes

Link to the subsequent service life: Service life of articles with high contact potential in professional settings; Service life of articles with low contact potential (palladium included as internal part of the article) in professional settings; Service life of articles with high contact potential by consumers; Service life of articles with low contact potential (palladium included as internal part of the article) by consumers; Service life of articles with high contact potential in industrial settings; Service life of articles with low contact potential (palladium included as internal part of the article) in industrial settings

IW-7 **Production of palladium-containing alloys**

Further description of the use:

Contributing activity/technique for the environment :

- ERC5: Use at industrial site leading to inclusion into/onto article

Contributing activity/technique for the workers:

- PROC 1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions
- PROC 3: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment conditions
- PROC 4: Chemical production where opportunity for exposure arises
- PROC 5: Mixing or blending in batch processes
- PROC 6: Calendering operations
- PROC 8a: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
- PROC 8b: Transfer of substance or mixture (charging and discharging) at dedicated facilities [EU REACH]
- PROC 9: Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
- PROC 13: Treatment of articles by dipping and pouring
- PROC 14: Tabletting, compression, extrusion, pelletisation, granulation
- 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
- PROC 23: Open processing and transfer operations with minerals/metals at elevated temperature $\,$
- PROC 24: High (mechanical) energy work-up of substances bound in materials and/or articles
- PROC 25: Other hot work operations with metals
- PROC 26: Handling of solid inorganic substances at ambient temperature
- PROC 27a: Production of metal powders (hot processes)

Product Category used: PC 1: Adhesives, sealants; PC 7: Base metals and alloys; PC 9a: Coatings and paints, thinners, paint removes; PC 14: Metal surface treatment products; PC 21: Laboratory chemicals; PC 33: Semiconductors; PC 38: Welding and soldering products, flux products; PC 0: Other:

Sector of end use: SU 2a: Mining (without offshore industries); SU 14: Manufacture of basic metals, including alloys; SU 15: Manufacture of fabricated metal products, except machinery and equipment; SU 16: Manufacture of computer, electronic and optical products, electrical equipment; SU 17: General manufacturing, e.g. machinery, equipment, vehicles, other transport equipment; SU 20: Health services; SU 0: Other:

Technical function of the substance: alloying element

Tonnage of substance for that use: tonnes/year

Substance supplied to that use: as such; in a mixture

Subsequent service life relevant for that use: yes

Link to the subsequent service life: Service life of articles with high contact potential in professional settings; Service life of articles with low contact potential (palladium included as internal part of the article) in professional settings; Service life of articles with high contact

potential by consumers; Service life of articles with low contact potential (palladium included as internal part of the article) by consumers; Service life of dental alloys by consumers; Service life of dental alloys in professional settings; Service life of articles with high contact potential in industrial settings; Service life of articles with low contact potential (palladium included as internal part of the article) in industrial settings