Information on uses

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Uses by workers in industrial settings

IU number	Identified use name	Process category	Environmental release category	Sector of end use
1	Manufacturing of Formaldehyde + aq. formaldehyds solutions	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 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)	ERC 1: Manufacture of substances ERC 2: Formulation of preparations ERC 3: Formulation in materials	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)
2	Manufacturing of chemicals / resins / polymers	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 6: Calendering operations 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	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 6a: Industrial use resulting in manufacture of another substance (use of intermediates) ERC 6b: Industrial use of reactive processing aids ERC 6c: Industrial use of monomers for manufacture of thermoplastics ERC 6d: Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers ERC 7: Industrial use of substances in closed	

(dedicated filling line, including

PROC 14: Production of preparations or articles by

weighing)

systems

tabletting, compression, extrusion, pelletisation

3 Formulation 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 6: Calendering operations PROC 8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at nondedicated 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)

pelletisation

reagent

PROC 14: Production of preparations or articles by tabletting, compression, extrusion,

PROC 15: Use as laboratory

ERC 2: Formulation of preparations [mixing] of ERC 3: Formulation in materials

SU 10: Formulation preparations and/or re-packaging (excluding alloys)

4 Industrial use of formaldehyde based products

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 6: Calendering operations PROC 8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at nondedicated 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)

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 products another substance (use of intermediates) ERC 6c: Industrial use of monomers for manufacture of thermoplastics ERC 6d: Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers

SU 2a: Mining (without offshore industries) SU 5: Manufacture of textiles, leather, SU 6a: Manufacture of wood and wood 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 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

PROC 14: Production of preparations or articles by tabletting, compression, extrusion, pelletisation PROC 7: Industrial spraying PROC 10: Roller application or brushing PROC 13: Treatment of articles by dipping and pouring PROC 16: Using material as fuel sources, limited exposure to unburned product to be expected 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

conversion SU 13: Manufacture of other non-metallic mineral products, e.g. plasters, cement SU 14: Manufacture of basic metals. including allovs SU 15: Manufacture of fabricated metal products, except machinery and equipment SU 18: Manufacture of furniture SU 19: Building and construction work

Production of woodbased materials (panels, bricks, etc)

5

PROC 2: Use in closed, continuous process with occasional controlled exposure PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 6: Calendering operations PROC 7: Industrial spraying PROC 8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at nondedicated 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 13: Treatment of articles by dipping and pouring

PROC 14: Production of preparations or articles by tabletting, compression, extrusion, pelletisation

PROC 24: High (mechanical) energy work-up of substances bound in materials and/or articles

PROC 2: Use in closed, continuous process with

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 resins, rubbers, polymers

ERC 2: Formulation of

ERC 3: Formulation in

preparations

SU 6a: Manufacture of wood and wood products SU 18: Manufacture of furniture SU 19: Building and construction work

Production of

PROC 1: Use in closed process, impregnated paper no likelihood of exposure occasional controlled exposure

ERC 2: Formulation of preparations ERC 3: Formulation in materials ERC 5: Industrial use

SU 6b: Manufacture of pulp, paper and paper products

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PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 7: Industrial spraying PROC in production of resins. 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 tabletting, compression, extrusion,

resulting in inclusion into or onto a matrix ERC 6d: Industrial use of process regulators for polymerisation processes rubbers, polymers

7 Production of bonded fibers or fiber mats

PROC 1: Use in closed process, no likelihood of exposure PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) 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 14: Production of preparations or articles by tabletting, compression, extrusion, pelletisation

pelletisation

ERC 2: Formulation of preparations ERC 3: Formulation in materials ERC 5: Industrial use resulting in inclusion into or onto a matrix

SU 5: Manufacture of textiles, leather, fur SU 6b: Manufacture of pulp, paper and paper products SU 12: Manufacture of plastics products, including compounding and conversion SU 13: Manufacture of other non-metallic mineral products, e.g. plasters, cement

Production of bonded particulates (abrasive, casting, moulding)

8

PROC 1: Use in closed process, no likelihood of 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 PROC 6: Calendering operations

PROC 7: Industrial spraying PROC 8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at nondedicated facilities PROC 8b: Transfer of substance

(charging/discharging) from/to vessels/large containers at dedicated facilities

or preparation

PROC 10: Roller application or

ERC 2: Formulation of preparations ERC 3: Formulation in materials ERC 5: Industrial use resulting in inclusion into or onto a matrix

of other non-metallic mineral products, e.g. plasters, cement SU 14: Manufacture of basic metals. including alloys SU 17: General manufacturing, e.g. machinery, equipment, vehicles, other transport equipment

SU 13: Manufacture

brushing
PROC 13: Treatment of articles by
dipping and pouring
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

9 Use of adhesives and coatings

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 8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at nondedicated facilities PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 7: Industrial spraying PROC 10: Roller application or brushing PROC 13: Treatment of articles by 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 resins, rubbers, polymers

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)

10 Production of rubber

dipping and pouring 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 nondedicated facilities PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 10: Roller application or brushing PROC 13: Treatment of articles by dipping and pouring PROC 14: Production of preparations or articles by tabletting, 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 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 resins, rubbers, polymers

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

11 Impregnation of textiles

PROC 1: Use in closed process, no likelihood of 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 6: Calendering operations PROC 7: Industrial spraying PROC 8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at nondedicated facilities

PROC 8b: Transfer of substance or preparation (charging/discharging) from/to

vessels/large containers at dedicated facilities PROC 10: Roller application or brushing

PROC 13: Treatment of articles by dipping and pouring PROC 21: Low energy

manipulation of substances bound in materials and/or articles

Production of paper

12

13

PROC 2: Use in closed, continuous process with occasional controlled exposure PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact)

PROC 6: Calendering operations PROC 7: Industrial spraying PROC 8a: Transfer of substance or preparation (charging/discharging) from/to

vessels/large containers at nondedicated facilities PROC 8b: Transfer of substance

or preparation (charging/discharging) from/to vessels/large containers at

dedicated facilities PROC 10: Roller application or brushing

Production of leather

PROC 3: Use in closed batch process (synthesis or formulation) PROC 8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at nondedicated facilities PROC 8b: Transfer of substance

or preparation

(charging/discharging) from/to vessels/large containers at dedicated facilities

PROC 13: Treatment of articles by dipping and pouring

PROC 5: Mixing or blending in

ERC 2: Formulation of

preparations ERC 3: Formulation in materials ERC 5: Industrial use resulting in inclusion into or onto a matrix

SU 5: Manufacture of textiles, leather, SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys) SU 11: Manufacture

of rubber products

ERC 2: Formulation of preparations ERC 3: Formulation in materials ERC 5: Industrial use resulting in inclusion into or onto a matrix

SU 6b: Manufacture of pulp, paper and paper products

ERC 2: Formulation of preparations ERC 3: Formulation in materials ERC 5: Industrial use resulting in inclusion into or onto a matrix

SU 5: Manufacture of textiles, leather, fur

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preparations and articles (multistage and/or significant contact) 14 SU 8: Manufacture Production of PROC 1: Use in closed process, ERC 5: Industrial use no likelihood of exposure fertilizer granules resulting in inclusion into of bulk, large scale PROC 2: Use in closed, or onto a matrix chemicals (including continuous process with petroleum products) occasional controlled exposure 15 Production of PROC 1: Use in closed process, ERC 2: Formulation of SU 2a: Mining (without offshore foams no likelihood of exposure preparations ERC 3: Formulation in PROC 5: Mixing or blending in industries) batch processes for formulation of materials SU 12: Manufacture ERC 5: Industrial use preparations and articles of plastics products, resulting in inclusion into (multistage and/or significant including compounding and contact) or onto a matrix PROC 8a: Transfer of substance conversion or preparation SU 19: Building and (charging/discharging) from/to construction work vessels/large containers at nondedicated facilities PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 14: Production of preparations or articles by tabletting, compression, extrusion, pelletisation 16 Production of PROC 8b: Transfer of substance ERC 2: Formulation of firelighters or preparation preparations (charging/discharging) from/to ERC 3: Formulation in vessels/large containers at materials dedicated facilities ERC 5: Industrial use PROC 14: Production of resulting in inclusion into preparations or articles by or onto a matrix tabletting, compression, extrusion, pelletisation PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant

batch processes for formulation of

contact)

Uses by professional workers

IU number	Identified use name	Process category	Environmental release category	Market sector by type of chemical product
17	Professional use of formaldehyde based products	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 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 10: Roller application or brushing PROC 11: Non industrial spraying PROC 13: Treatment of articles by dipping and pouring PROC 15: Use as laboratory reagent PROC 16: Using material as fuel sources, limited exposure to unburned product to be expected PROC 19: Hand-mixing with intimate contact and only PPE available. 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	or onto a matrix ERC 8a: Wide dispersive indoor use of processing aids in open systems ERC 8b: Wide dispersive	
18	Professional use of resins in wood applications (glues,)	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 10: Roller application or brushing PROC 15: Use as laboratory reagent	inclusion into or onto a matrix ERC 8f: Wide dispersive outdoor use resulting in inclusion into or onto a	PC 1: Adhesives, sealants
19	Application of	PROC 5: Mixing or blending in	ERC 2: Formulation of	PC 9a: Coatings and

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adhesives and batch processes for formulation of preparations paints, thinners, ERC 3: Formulation in preparations and articles coatings paint removes (multistage and/or significant materials contact) ERC 8c: Wide dispersive PROC 8a: Transfer of substance or indoor use resulting in preparation (charging/discharging) inclusion into or onto a from/to vessels/large containers at matrix ERC 8f: Wide dispersive non-dedicated facilities PROC 8b: Transfer of substance or outdoor use resulting in preparation (charging/discharging) inclusion into or onto a from/to vessels/large containers at matrix dedicated facilities PROC 10: Roller application or brushing PROC 11: Non industrial spraying PROC 13: Treatment of articles by dipping and pouring PROC 15: Use as laboratory reagent PROC 19: Hand-mixing with intimate contact and only PPE available. 20 Use of firelighters PROC 16: Using material as fuel ERC 0: Other:not PC 13: Fuels sources, limited exposure to applicable unburned product to be expected 21 Production of PROC 5: Mixing or blending in ERC 2: Formulation of batch processes for formulation of foams preparations ERC 3: Formulation in preparations and articles (multistage and/or significant materials contact) ERC 5: Industrial use PROC 8a: Transfer of substance or resulting in inclusion into preparation (charging/discharging) or onto a matrix from/to vessels/large containers at ERC 8c: Wide dispersive non-dedicated facilities indoor use resulting in PROC 8b: Transfer of substance or inclusion into or onto a preparation (charging/discharging) matrix from/to vessels/large containers at ERC 8f: Wide dispersive dedicated facilities outdoor use resulting in inclusion into or onto a matrix 22 Cleaning agents PROC 10: Roller application or ERC 8a: Wide dispersive PC 8: Biocidal indoor use of processing brushing products (e.g. PROC 11: Non industrial spraying aids in open systems disinfectants, pest PROC 19: Hand-mixing with ERC 8b: Wide dispersive control) intimate contact and only PPE PC 31: Polishes and indoor use of reactive available. substances in open wax blends systems PC 35: Washing and ERC 8d: Wide dispersive cleaning products outdoor use of processing (including solvent aids in open systems based products) PC 39: Cosmetics, personal care products

Uses by consumers

IU number	Identified use name	Chemical product category	Environmental release category
23	Consumer use of formaldehyde based products	PC 1: Adhesives, sealants PC 3: Air care products PC 8: Biocidal products (e.g. disinfectants, pest control) PC 9a: Coatings and paints, thinners, paint removes PC 9b: Fillers, putties, plasters, modelling clay PC 9c: Finger paints PC 13: Fuels PC 15: Non-metal-surface treatment products PC 18: Ink and toners PC 21: Laboratory chemicals PC 23: Leather tanning, dye, finishing, impregnation and care products PC 31: Polishes and wax blends PC 32: Polymer preparations and compounds PC 35: Washing and cleaning products (including solvent based products) PC 37: Water treatment chemicals PC 39: Cosmetics, personal care products	ERC 8b: Wide dispersive indoor use of reactive substances in open systems ERC 8c: Wide dispersive indoor use resulting in inclusion into or onto a matrix 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 8f: Wide dispersive outdoor use resulting in inclusion into or onto a matrix 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
24	Application of adhesives and coatings	PC 1: Adhesives, sealants PC 9a: Coatings and paints, thinners, paint removes PC 9b: Fillers, putties, plasters, modelling clay PC 18: Ink and toners PC 32: Polymer preparations and compounds	ERC 8c: Wide dispersive indoor use resulting in inclusion into or onto a matrix ERC 8f: Wide dispersive outdoor use resulting in inclusion into or onto a matrix 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
25	Use of firelighters	PC 13: Fuels	ERC 8f: Wide dispersive outdoor use resulting in inclusion into or onto a matrix 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 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
26	Cleaning agents	PC 8: Biocidal products (e.g. disinfectants, pest control) PC 31: Polishes and wax blends PC 35: Washing and cleaning products (including solvent based products) PC 39: Cosmetics, personal care products	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