

## Map of identified uses

EXPOSURE SCENARIO	IDENTIFIED USE	SECTOR OF USE (SU)	PREPARATION CATEGORY (PC)	PROCESS CATEGORY (PROC)	ARTICLE CATEGORY (AC)	ENVIRONMENTAL RELEASE CATEGORY (ERC)
Manufacture of substance	Manufacture of isobutanol Manufacture	SU 3 Industrial uses: Uses of substances as such or in preparations* at industrial sites	Not applicable	PROC 1 Use in closed process, no likelihood of exposure	Not applicable	ERC 1 Manufacture of substances
		SU 8 Manufacture of bulk, large scale chemicals (including petroleum products)		PROC 2 Use in closed, continuous process with occasional controlled exposure		ERC 4 Industrial use of processing aids in processes and products, not becoming part of articles
		SU 9 Manufacture of fine chemicals		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 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 15 Use as laboratory reagent		ERC 6a Industrial use resulting in manufacture of another substance (use of intermediates)
Use as intermediate	Use as intermediate End use	SU 3 Industrial uses: Uses of substances as such or in preparations* at industrial sites	PC 19 Intermediate	PROC 1 Use in closed process, no likelihood of exposure PROC 2 Use in closed, continuous process with occasional controlled exposure	Not applicable	ERC 6a Industrial use resulting in manufacture of another substance (use of intermediates)

		<p>SU 8 Manufacture of bulk, large scale chemicals (including petroleum products)</p> <p>SU 9 Manufacture of fine chemicals</p>		<p>PROC 3 Use in closed batch process (synthesis or formulation)</p> <p>PROC 4 Use in batch and other process (synthesis) where opportunity for exposure arises</p> <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><b>Formulation &amp; (re)packing of substances and mixtures</b></p>	<p><b>Formulation &amp; (re)packing of substance and mixture</b></p> <p>Formulation</p>	<p>SU 3 Industrial uses: Uses of substances as such or in preparations* at industrial sites</p>	<p>Not applicable</p>	<p>PROC 1 Use in closed process, no likelihood of exposure</p> <p>PROC 2 Use in closed, continuous process with occasional controlled exposure</p> <p>PROC 3 Use in closed batch process (synthesis or formulation)</p> <p>PROC 4 Use in batch and other process (synthesis) where opportunity for exposure arises</p>	<p>Not applicable</p>	<p>ERC 2 Formulation of preparations***</p>

		SU 10	Formulation [mixing] of preparations and/or re-packaging (excluding alloys)		<p>PROC 5 Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)</p> <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 15 Use as laboratory reagent</p>		
Distribution of substance	<p>Distribution of substance</p> <p>End use</p>	SU 3	Industrial uses: Uses of substances as such or in preparations* at industrial sites	Not applicable	<p>PROC 1 Use in closed process, no likelihood of exposure</p> <p>PROC 2 Use in closed, continuous process with occasional controlled exposure</p> <p>PROC 3 Use in closed batch process (synthesis or formulation)</p> <p>PROC 4 Use in batch and other process (synthesis) where opportunity for exposure arises</p>	Not applicable	ERC 1 Manufacture of substances
		SU 8	Manufacture of bulk, large scale chemicals (including petroleum products)				

	Distribution of substance  End use	SU 9	Manufacture of fine chemicals	<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 15 Use as laboratory reagent</p> <p>PROC 1 Use in closed process, no likelihood of exposure</p> <p>PROC 2 Use in closed, continuous process with occasional controlled exposure</p> <p>PROC 3 Use in closed batch process (synthesis or formulation)</p> <p>PROC 4 Use in batch and other process (synthesis) where opportunity for exposure arises</p> <p>PROC 8a Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities</p>	ERC 2	Formulation of preparations*
		SU 22	Professional uses: Public domain (administration, education, entertainment, services, craftsmen)	<p>ERC 1 Manufacture of substances</p> <p>ERC 2 Formulation of preparations*</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 15 Use as laboratory reagent</p>		
<p><b>Use in coatings (paints, ink, toners, adhesives)</b></p>	<p><b>Use in coatings (paints, ink, toners, adhesives)</b></p> <p>End use</p>	<p>SU 3</p> <p>Industrial uses: Uses of substances as such or in preparations* at industrial sites</p>	<p>Not applicable</p>	<p>PROC 1 Use in closed process, no likelihood of exposure</p> <p>PROC 2 Use in closed, continuous process with occasional controlled exposure</p> <p>PROC 3 Use in closed batch process (synthesis or formulation)</p> <p>PROC 4 Use in batch and other process (synthesis) where opportunity for exposure arises Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)</p> <p>PROC 5 Industrial spraying</p> <p>PROC 7 Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities</p> <p>PROC 8a</p>	<p>Not applicable</p>	<p>ERC 4</p> <p>Industrial use of processing aids in processes and products, not becoming part of articles</p>

	<p><b>Use in coatings (paints, ink, toners, adhesives)</b></p> <p>End use</p>	SU 22	<p>Professional uses: Public domain (administration, education, entertainment, services, craftsmen)</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 10 Roller application or brushing</p> <p>PROC 13 Treatment of articles by dipping and pouring</p> <p>PROC 15 Use as laboratory reagent</p> <p>PROC 1 Use in closed process, no likelihood of exposure</p> <p>PROC 2 Use in closed, continuous process with occasional controlled exposure</p> <p>PROC 3 Use in closed batch process (synthesis or formulation)</p> <p>PROC 4 Use in batch and other process (synthesis) where opportunity for exposure arises</p> <p>PROC 5 Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)</p> <p>PROC 8a Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities</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>
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				<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 10 Roller application or brushing</p> <p>PROC 11 Non industrial spraying</p> <p>PROC 13 Treatment of articles by dipping and pouring</p> <p>PROC 15 Use as laboratory reagent</p> <p>PROC 19 Hand-mixing with intimate contact and only PPE available</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><b>Use in coatings (paints, ink, toners, adhesives)</b></p> <p>Consumer use</p>	SU 21	<p>Consumer uses: Private households (= general public = consumers)</p> <p>PC 1 Adhesives, sealants</p> <p>PC 4 Anti-Freeze and de-icing products</p> <p>PC 9 Intermediate</p> <p>PC 15 Non-metal-surface treatment products</p> <p>PC 18 Ink and toners</p> <p>PC 23 Leather tanning, dye, finishing, impregnation and care products</p>	Not applicable		<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>PC 24 Lubricants, greases, release products</p> <p>PC 31 Polishes and wax blends</p>			<p>ERC 8f Wide dispersive outdoor use resulting in inclusion into or onto a matrix</p>
<p>Use in cleaning agents</p>	<p>Use in cleaning agents</p> <p>End use</p>	<p>SU 3</p> <p>Industrial uses: Uses of substances as such or in preparations* at industrial sites</p>	<p>Not applicable</p>	<p>PROC 1 Use in closed process, no likelihood of exposure</p> <p>PROC 2 Use in closed, continuous process with occasional controlled exposure</p> <p>PROC 3 Use in closed batch process (synthesis or formulation)</p> <p>PROC 4 Use in batch and other process (synthesis) where opportunity for exposure arises</p> <p>PROC 7 Industrial spraying</p> <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>Not applicable</p>	<p>ERC 4 Industrial use of processing aids in processes and products, not becoming part of articles</p>

				<p>PROC 9 Transfer of substance or preparation into small containers (dedicated filling line, including weighing)</p> <p>PROC 10 Roller application or brushing</p> <p>PROC 13 Treatment of articles by dipping and pouring</p>		
	<p><b>Use in cleaning agents</b></p> <p>End use</p>	SU 22	<p>Professional uses: Public domain (administration, education, entertainment, services, craftsmen)</p>	<p>PROC 1 Use in closed process, no likelihood of exposure</p> <p>PROC 2 Use in closed, continuous process with occasional controlled exposure</p> <p>PROC 3 Use in closed batch process (synthesis or formulation)</p> <p>PROC 4 Use in batch and other process (synthesis) where opportunity for exposure arises</p> <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>ERC 8a</p> <p>ERC 8d</p>	<p>Wide dispersive indoor use of processing aids in open systems</p> <p>Wide dispersive outdoor use of processing aids in open systems</p>



<p><b>Use in lubricants</b></p>	<p><b>Use in lubricants</b> End use</p>	<p>SU 3 Industrial uses: Uses of substances as such or in preparations* at industrial sites</p>	<p>Not applicable</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 7 Industrial spraying Transfer of substance or preparation PROC 8a (charging/discharging) from/to vessels/large containers at non-dedicated facilities Transfer of substance or preparation PROC 8b (charging/discharging) from/to vessels/large containers at dedicated facilities Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 9 Roller application or brushing PROC 10 Treatment of articles by dipping and pouring PROC 13 Lubrication at high energy conditions and in partly open process PROC 17 Greasing at high energy conditions PROC 18</p>	<p>Not applicable</p>	<p>ERC 7 Industrial use of sub-stances in closed systems  ERC 4 Industrial use of processing aids in processes and products, not becoming part of articles</p>
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	<p><b>Use in lubricants</b></p> <p>End use</p>	SU 22	<p>Professional uses: Public domain (administration, education, entertainment, services, craftsmen)</p>	<p>PROC 1 Use in closed process, no likelihood of exposure</p> <p>PROC 2 Use in closed, continuous process with occasional controlled exposure</p> <p>PROC 3 Use in closed batch process (synthesis or formulation)</p> <p>PROC 4 Use in batch and other process (synthesis) where opportunity for exposure arises</p> <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 10 Roller application or brushing</p> <p>PROC 11 Non industrial spraying</p> <p>PROC 13 Treatment of articles by dipping and pouring</p> <p>PROC 17 Lubrication at high energy conditions and in partly open process</p> <p>PROC 18 Greasing at high energy conditions</p>	<p>ERC 8a Wide dispersive indoor use of processing aids in open systems</p> <p>ERC 8d Wide dispersive outdoor use of processing aids in open systems</p> <p>ERC 9a Wide dispersive indoor use of substances in closed systems</p> <p>ERC 9b Wide dispersive outdoor use of substances in closed systems</p>
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				PROC 20	Heat and pressure transfer fluids in dispersive, professional use but closed systems					
	Use in lubricants Consumer use	SU 21	Consumer uses: Private households (= general public = consumers)	PC 1 PC 6** PC 24 PC 31 PC 35	Adhesives, sealants PC6 deleted Lubricants, greases, release products Polishes and wax blends Washing and cleaning products (including solvent based products)	Not applicable	ERC 8a ERC 8d ERC 9a ERC 9b	Wide dispersive indoor use of processing aids in open systems Wide dispersive outdoor use of processing aids in open systems Wide dispersive indoor use of substances in closed systems Wide dispersive outdoor use of substances in closed systems		
Metal working fluids / rolling oils	Metal working fluids/rolling oils End use	SU 3	Industrial uses: Uses of substances as such or in preparations* at industrial sites	Not applicable	Not applicable	PROC 1 PROC 2 PROC 3	Use in closed process, no likelihood of exposure Use in closed, continuous process with occasional controlled exposure Use in closed batch process (synthesis or formulation)	Not applicable	ERC 4	Industrial use of processing aids in processes and products, not becoming part of articles

				<p>PROC 5 Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)</p> <p>PROC 7 Industrial spraying</p> <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 10 Roller application or brushing</p> <p>PROC 13 Treatment of articles by dipping and pouring</p> <p>PROC 17 Lubrication at high energy conditions and in partly open process</p>		
	<p><b>Metal working fluids/rolling oils</b></p> <p>End use</p>	SU 22	<p>Professional uses: Public domain (administration, education, entertainment, services, craftsmen)</p>	<p>PROC 1 Use in closed process, no likelihood of exposure</p>	ERC 8a	<p>Wide dispersive indoor use of processing aids in open systems</p>

				<p>PROC 2 Use in closed, continuous process with occasional controlled exposure</p> <p>PROC 3 Use in closed batch process (synthesis or formulation) Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact)</p> <p>PROC 5 Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities</p> <p>PROC 8a Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities</p> <p>PROC 8b Roller application or brushing</p> <p>PROC 10 Non industrial spraying</p> <p>PROC 11 Treatment of articles by dipping and pouring</p> <p>PROC 13 Lubrication at high energy conditions and in partly open process</p>			
Use as consumer care product or disinfectant	Use as consumer care product or disinfectant Consumer use	SU 21	Consumer uses: Private households (= general public = consumers)	PC 28 Perfumes, fragrances	Not applicable	Not applicable	ERC 8a Wide dispersive indoor use of processing aids in open systems

			PC 39 Cosmetics, personal care products			ERC 8d Wide dispersive outdoor use of processing aids in open systems
<b>Use in laboratories</b>	<b>Use in laboratories</b> End use	SU 22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)	Not applicable	PROC 10 Roller application or brushing  PROC 15 Use as laboratory reagent	Not applicable	ERC 8a Wide dispersive indoor use of processing aids in open systems

\* PC9 has been split into 9a, 9b, 9c;

\*\* The use descriptor PC6 has been deleted in the current "Guidance on information requirements and chemical safety assessment – Chapter R.12 Use descriptor system". According to the guidance PC6 is covered by PC31 and PC35.

\*\*\* **Please note:** For the sake of consistency with the descriptor system in IUCLID 5.2, in these lists the term "preparation" has not been replaced by "mixture".

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