

Ammonium nitrate



Map of identified uses

EXPOSURE SCENARIO	SECTOR OF USE (SU)	PREPARATION CATEGORY (PC)	PROCESS CATEGORY (PROC)	ARTICLE CATEGORY (AC)	ENVIRONMENTAL RELEASE CATEGORY (ERC)	
Manufacturing of the substance, including handling, storage and control Manufacture	SU 8 Manufacture of bulk, large scale chemicals (including petroleum products)	Not applicable	PROC 2	Use in closed, continuous process with occasional controlled exposure	Not applicable	ERC 1 Manufacture of substances
			PROC 3	Use in closed batch process (synthesis or formulation)		
			PROC 1	Use in closed process, no likelihood of exposure		
			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)			
	PROC 14		Production of preparations* or articles by tableting, compression, extrusion, pelletisation			
PROC 15	Use as laboratory reagent					
	SU 9 Manufacture of fine chemicals					



<p>Sampling, loading, filling, transfer, dumping, bagging of substance (charging/discharging) at non-dedicated facilities. Industrial/professional setting. Formulation Industrial Professional</p>	<p>SU 3 Industrial uses: Uses of substances as such or in preparations* at industrial sites</p> <p>SU 22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)</p>	<p>Not applicable</p>	<p>PROC 8a Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities</p>	<p>Not applicable</p>	<p>ERC 2 Formulation of preparations* Industrial use resulting in manufacture of another substance (use of intermediates) ERC 6a Wide dispersive indoor use of reactive substances in open systems ERC 8b Wide dispersive outdoor use of reactive substances in open systems ERC 8e</p>
<p>Sampling, loading, filling, transfer, dumping, bagging of substance (charging/discharging) at dedicated facilities. Industrial/professional setting. Formulation Industrial Professional</p>	<p>SU 3 Industrial uses: Uses of substances as such or in preparations* at industrial sites</p>	<p>Not applicable</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 2 Formulation of preparations*</p>
<p>Storage Formulation Industrial Professional</p>	<p>SU 22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)</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>Not applicable</p>	<p>ERC 6a Industrial use resulting in manufacture of another substance (use of intermediates) ERC 8b Wide dispersive indoor use of reactive substances in open systems ERC 8e Wide dispersive outdoor use of reactive substances in open systems ERC 2 Formulation of preparations* Industrial use resulting in manufacture of another substance (use of intermediates) ERC 6a Wide dispersive indoor use of reactive substances in open systems ERC 8b</p>

	SU 22	Professional uses: Public domain (administration, education, entertainment, services, craftsmen)					ERC 8e	Wide dispersive outdoor use of reactive substances in open systems
Transfer of substance into small containers (dedicated filling line, including weighing). Industrial/professional setting. Formulation Industrial Professional	SU 3	Industrial uses: Uses of substances as such or in preparations* at industrial sites	Not applicable	PROC 9	Transfer of substance or preparation into small containers (dedicated filling line, including weighing)	Not applicable	ERC 2	Formulation of preparations*
	SU 22	Professional uses: Public domain (administration, education, entertainment, services, craftsmen)					ERC 6a	Industrial use resulting in manufacture of another substance (use of intermediates)
							ERC 8b	Wide dispersive indoor use of reactive substances in open systems
							ERC 8e	Wide dispersive outdoor use of reactive substances in open systems
Q control Formulation Industrial Professional	SU 3	Industrial uses: Uses of substances as such or in preparations* at industrial sites	Not applicable	PROC 15	Use as laboratory reagent	Not applicable	ERC 2	Formulation of preparations*
	SU 22	Professional uses: Public domain (administration, education, entertainment, services, craftsmen)					ERC 6a	Industrial use resulting in manufacture of another substance (use of intermediates)
							ERC 8b	Wide dispersive indoor use of reactive substances in open systems
							ERC 8e	Wide dispersive outdoor use of reactive substances in open systems
Use of ammonium nitrate in the manufacturing of formulations for adhesives and sealants, explosives, fertilizers and water treatment chemicals. Formulation	SU 3	Industrial uses: Uses of substances as such or in preparations* at industrial sites	PC 1	Adhesives, sealants	PROC 3	Use in closed batch process (synthesis or formulation)	Not applicable	ERC 2
	SU 22	Professional uses: Public domain (administration, education, entertainment, services, craftsmen)	PC 11	Explosives				
			PC 12	Fertilizers	PROC 5	Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant con-tact)		
			PC 37	Water treatment chemicals				

Treating or coating of seed with fertilizer containing ammonium nitrate Formulation	SU 10	Formulation [mixing] of preparations and/or re-packaging (excluding alloys)	PC 12 Fertilizers	PROC 13 Treatment of articles by dipping and pouring	Not applicable	ERC 2 Formulation of preparations*
Use of ammonium nitrate as an intermediate to synthesise other substances Industrial	SU 3	Industrial uses: Uses of substances as such or in preparations* at industrial sites	PC 19 Intermediate	PROC 2 Use in closed, continuous process with occasional controlled exposure PROC 3 Use in closed batch process (synthesis or formulation)	Not applicable	ERC 6a Industrial use resulting in manufacture of another substance (use of intermediates)
Sampling, loading, filling, transfer, dumping, bagging of substance (charging/discharging) at non-dedicated facilities. Industrial/professional setting. Formulation Industrial Professional	SU 3 SU 22	Industrial uses: Uses of substances as such or in preparations* at industrial sites Professional uses: Public domain (administration, education, entertainment, services, craftsmen)	Not applicable	PROC 8a Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities	Not applicable	ERC 2 Formulation of preparations* ERC 6a Industrial use resulting in manufacture of another substance (use of intermediates) ERC 8b Wide dispersive indoor use of reactive substances in open systems ERC 8e Wide dispersive outdoor use of reactive substances in open systems
Sampling, loading, filling, transfer, dumping, bagging of substance (charging/discharging) at dedicated facilities. Industrial/professional setting. Formulation Industrial Professional	SU 3 SU 22	Industrial uses: Uses of substances as such or in preparations* at industrial sites Professional uses: Public domain (administration, education, entertainment, services, craftsmen)	Not applicable	PROC 8b Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	Not applicable	ERC 2 Formulation of preparations* ERC 6a Industrial use resulting in manufacture of another substance (use of intermediates) ERC 8b Wide dispersive indoor use of reactive substances in open systems ERC 8e Wide dispersive outdoor use of reactive substances in open systems

<p>Storage Formulation Industrial Professional</p>	<p>SU 3 Industrial uses: Uses of substances as such or in preparations* at industrial sites</p> <p>SU 22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)</p>	<p>Not applicable</p>	<p>PROC 1 Use in closed process, no likelihood of exposure</p>	<p>Not applicable</p>	<p>ERC 2 Formulation of preparations*</p> <p>ERC 6a Industrial use resulting in manufacture of another substance (use of intermediates)</p> <p>ERC 8b Wide dispersive indoor use of reactive substances in open systems</p> <p>ERC 8e Wide dispersive outdoor use of reactive substances in open systems</p>
<p>Transfer of substance into small containers (dedicated filling line, including weighing). Industrial/professional setting. Formulation Industrial Professional</p>	<p>SU 3 Industrial uses: Uses of substances as such or in preparations* at industrial sites</p> <p>SU 22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)</p>	<p>Not applicable</p>	<p>PROC 9 Transfer of substance or preparation into small containers (dedicated filling line, including weighing)</p>	<p>Not applicable</p>	<p>ERC 2 Formulation of preparations*</p> <p>ERC 6a Industrial use resulting in manufacture of another substance (use of intermediates)</p> <p>ERC 8b Wide dispersive indoor use of reactive substances in open systems</p> <p>ERC 8e Wide dispersive outdoor use of reactive substances in open systems</p>
<p>Q control Formulation Industrial Professional</p>	<p>SU 3 Industrial uses: Uses of substances as such or in preparations* at industrial sites</p> <p>SU 22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)</p>	<p>Not applicable</p>	<p>PROC 15 Use as laboratory reagent</p>	<p>Not applicable</p>	<p>ERC 2 Formulation of preparations*</p> <p>ERC 6a Industrial use resulting in manufacture of another substance (use of intermediates)</p> <p>ERC 8b Wide dispersive indoor use of reactive substances in open systems</p> <p>ERC 8e Wide dispersive outdoor use of reactive substances in open systems</p>

Professional use of fertilizers containing ammonium nitrate – liquid fertigation at open field (non industrial spraying) Professional	SU 22	Professional uses: Public domain (administration, education, entertainment, services, craftsmen)	PC 12	Fertilizers	PROC 11	Non industrial spraying	Not applicable	ERC 8e	Wide dispersive outdoor use of reactive substances in open systems
Professional use of fertilizers containing ammonium nitrate – liquid fertigation in the soil Professional	SU 22	Professional uses: Public domain (administration, education, entertainment, services, craftsmen)	PC 12	Fertilizers	PROC 2	Use in closed, continuous process with occasional controlled exposure	Not applicable	ERC 8e	Wide dispersive outdoor use of reactive substances in open systems
Professional use of fertilizers containing ammonium nitrate – fertigation at open field Professional	SU 22	Professional uses: Public domain (administration, education, entertainment, services, craftsmen)	PC 12	Fertilizers	PROC 8a	Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities	Not applicable	ERC 8e	Wide dispersive outdoor use of reactive substances in open systems
Professional use of fertilizers containing ammonium nitrate – outdoor mixing Professional	SU 22	Professional uses: Public domain (administration, education, entertainment, services, craftsmen)	PC 12	Fertilizers	PROC 19	Hand-mixing with intimate contact and only PPE available	Not applicable	ERC 8e	Wide dispersive outdoor use of reactive substances in open systems
Professional use of fertilizers containing ammonium nitrate – indoor mixing Professional	SU 22	Professional uses: Public domain (administration, education, entertainment, services, craftsmen)	PC 12	Fertilizers	PROC 19	Hand-mixing with intimate contact and only PPE available	Not applicable	ERC 8b	Wide dispersive indoor use of reactive substances in open systems
Professional use of fertilizers containing ammonium nitrate – greenhouse liquid fertigation in the soil Professional	SU 22	Professional uses: Public domain (administration, education, entertainment, services, craftsmen)	PC 12	Fertilizers	PROC 2	Use in closed, continuous process with occasional controlled exposure	Not applicable	ERC 8b	Wide dispersive indoor use of reactive substances in open systems

Professional use of fertilizers containing ammonium nitrate – greenhouse liquid fertigation (non industrial spraying) Professional	SU 22	Professional uses: Public domain (administration, education, entertainment, services, craftsmen)	PC 12	Fertilizers	PROC 11	Non industrial spraying	Not applicable	ERC 8b	Wide dispersive indoor use of reactive substances in open systems
Consumer end use – fertilization at open field Consumer	SU 21	Consumer uses: Private households (= general public = consumers)	PC 12	Fertilizers		Not applicable	Not applicable	ERC 8e	Wide dispersive outdoor use of reactive substances in open systems
Consumer end use – indoor use of fertilizers Consumer	SU 21	Consumer uses: Private households (= general public = consumers)	PC 12	Fertilizers		Not applicable	Not applicable	ERC 8b	Wide dispersive indoor use of reactive substances in open systems
Consumer end use – matches and fireworks Consumer	SU 21	Consumer uses: Private households (= general public = consumers)	PC 11	Explosives		Not applicable	Not applicable	ERC 10a	Wide dispersive outdoor use of long-life articles and materials with low release

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

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