CHEMICAL SAFETY REPORT

Update 3: Submitted September 2021

Replaces 2nd Update (March 2016), 1st Update (May 2013) and original version (2010).

Substance Name: Ammonium octamolybdate
EC Number: 235-650-6
CAS Number: 12411-64-2
Registrant's Identity: Joint CSR submitted by the Lead Registrant (Climax Molybdenum B.V.) on behalf of all members of the joint submission MOCONJS-OCTAMOLY. Document prepared by the IMOA REACH Molybdenum Consortium (MoCon)

See also the ***2014 OECD Highly Soluble Molybdenum Salts Mutual Acceptance of Data (MAD) dataset (containing primarily sodium molybdate data used for read-across in many instances in this CSR),*** which is attached in IUCLID Section 13. The afore-mentioned MAD status data is:

1) likewise contained in the relevant individual sections within this CSR.
2) also downloadable from the OECD website at: https://hpvchemicals.oecd.org/UI/SIDS_Details.aspx?key=02c805e5-7d07-48e6-bf6d-a163f74b3a2a&idx=0

Several supporting documents/reports are to be considered together with the CSR. They are referenced in the CSR, and are attached in the technical registration dossier in IUCLID section 13.2:

- MoCon read-across concept/justification for human health hazards
- MoCon read-across concept/justification for environmental hazards
- Speciation of molybdenum compounds in water: UV spectra (in support of the above)
- DNEL derivation report
- Background document – Environmental Effects Assessments *(updated July 2021)*
- Background document – Environmental Fate properties *(updated May 2021)*
- Background document – Regional / ambient monitoring data (water, soil, sediment)
- OECD SIDS Initial Assessment Profile (SIAP), containing the dataset with MAD status
- List of assessors (list of professionals that contributed to the registration dossier).

2. MANUFACTURE AND USES

Table 5. Quantities (in tonnes/year)

Year	Tonnages (tonnes per year)
-	For confidentiality reasons the data on manufactured or imported **quantities per registrant are not provided in this joint CSR**, but are instead provided by each individual registrant of this substance in their technical registration dossier (section 3.2 in IUCLID).

2.1. Manufacture

No information available on manufacture in the EU.

To the best of our knowledge, this substance is not manufactured at all in the EU – demand for this niche low volume product is met by imports from manufacturers in the USA and Asia: (a) Ammonium octamolybdate is manufactured by the partial thermo-decomposition of diammonium dimolybdate, EC-number 248-517-2, volatizing water and approximately 50% of the ammonia. The ammonium octamolybdate is then subjected to size reduction. (b) Ammonium octamolybdate is also precipitated from a solution of diammonium dimolybdate and molybdenum trioxide, EC-number 215-204-7. The ammonium octamolybdate is recovered by filtration prior to being dried and subjected to size reduction.

2.2. Identified uses

Table 6. Formulation

	Formulation
F-1	**Formulation of ammonium octamolybdate into inks and surface coatings for laser imaging** Further description of the use: The AOM acts as a white pigment in the formulation of inks and surface coating formulations. The white coating is activated/written/scribed with a lower power laser to leave a black image on a white background. Contributing activity/technique for the environment : **- ERC2: Formulation into mixture** **- ERC3: Formulation into solid matrix** Contributing activity/technique for the workers : **- 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 15: Use as laboratory reagent** **- PROC 26: Handling of solid inorganic substances at ambient temperature** **- PROC28: Manual maintenance (cleaning and repair) of machinery** **Product Category formulated:** PC 9a: Coatings and paints, thinners, paint removes; PC 15: Non-metal-surface treatment products; PC 18: Ink and toners; PC 21: Laboratory chemicals; PC 26: Paper and board treatment products **Technical function of the substance:** photochemical Tonnage of substance for that use: tonnes/year Substance supplied to that use: as such

	Remarks: < 60% concentration, and much less depending on DU application. Specific information is often proprietary and commercially sensitive. The number of sites, estimated at 50, is a world-wide estimate, not EU. For competition reasons a tonnage indication is not included, but is available to ECHA upon request to the Molybdenum Consortium at sief@molybdenumconsortium.org. Related assessment: use not assessed
F-2	**Formulation of ammonium octamolybdate into plastics for laser imaging** Further description of the use: The AOM acts as a white pigment in the formulation of plastics masterbatches and direct addition to plastics, where it is activated/written/scribed with a lower power laser to leave a black image on a (for example) white background. Contributing activity/technique for the environment : **- ERC3: Formulation into solid matrix** Contributing activity/technique for the workers : **- 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 14: Tabletting, compression, extrusion, pelletisation, granulation** **- PROC 15: Use as laboratory reagent** **- PROC 26: Handling of solid inorganic substances at ambient temperature** **- PROC28: Manual maintenance (cleaning and repair) of machinery** **Product Category formulated:** PC 32: Polymer preparations and compounds **Technical function of the substance:** photochemical Tonnage of substance for that use: tonnes/year Limited number of sites: Migrated value from IUCLID 5.6 to IUCLID 6: 1-10 sites Substance supplied to that use: as such Remarks: % concentration will vary depending on the DU application. Specific information is often proprietary and commercially sensitive. No. of sites: 3 For competition reasons a tonnage indication is not included, but is available to ECHA upon request to the Molybdenum Consortium at sief@molybdenumconsortium.org . Related assessment: use not assessed
F-3	**Formulation of ammonium octamolybdate into paper for laser imaging** Further description of the use: The AOM acts as a white pigment, used as an additive in paper pulp, where it to be activated/written/scribed with a low power laser to leave a black image on (for example in the formulation of paper processing additives and direct addition to paper. Contributing activity/technique for the environment : **- ERC2: Formulation into mixture** **- ERC3: Formulation into solid matrix** Contributing activity/technique for the workers : **- 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 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 26: Handling of solid inorganic substances at ambient temperature** **- PROC28: Manual maintenance (cleaning and repair) of machinery** **Product Category formulated:** PC 26: Paper and board treatment products; PC 34: Textile dyes, and impregnating products **Technical function of the substance:** photochemical Tonnage of substance for that use: tonnes/year Limited number of sites: Migrated value from IUCLID 5.6 to IUCLID 6: 1-10 sites Substance supplied to that use: as such Remarks: % concentration will vary depending on the DU's application, specific information is often proprietary and commercially sensitive. No. of sites: < 3 For competition reasons a tonnage indication is not included, but is available to ECHA upon request to the Molybdenum Consortium at sief@molybdenumconsortium.org . Related assessment: use not assessed
F-4	**Formulation of ammonium octamolybdate** Further description of the use: Contributing activity/technique for the environment : **- ERC2: Formulation into mixture** **- ERC3: Formulation into solid matrix** Contributing activity/technique for the workers : **- 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 26: Handling of solid inorganic substances at ambient temperature** **- PROC28: Manual maintenance (cleaning and repair) of machinery** **Technical function of the substance:** no technical function Tonnage of substance for that use: tonnes/year Substance supplied to that use: as such Related assessment: use not assessed

Table 7. Uses at industrial sites

	Uses at industrial sites
IW-1	**Industrial use of inks and containing ammonium octamolybdate for surface coatings by laser imaging** Further description of the use:

	The AOM-containing ink/surface coating is applied to a substrate for laser imaging. Contributing activity/technique for the environment : **- ERC5: Use at industrial site leading to inclusion into/onto article** Contributing activity/technique for the workers : **- 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 10: Roller application or brushing** **- PROC 15: Use as laboratory reagent** **- PROC 26: Handling of solid inorganic substances at ambient temperature** **- PROC28: Manufacture of machinery** **Product Category used:** PC 9a: Coatings and paints, thinners, paint removes; PC 15: Non-metal-surface treatment products; PC 18: Ink and toners; PC 21: Laboratory chemicals; PC 26: Paper and board treatment products **Sector of end use:** SU 5: Manufacture of textiles, leather, fur; SU 6a: Manufacture of wood and wood products; SU 6b: Manufacture of pulp, paper and paper products; SU 7: Printing and reproduction of recorded media; SU 11: Manufacture of rubber products; SU 12: Manufacture of plastics products, including compounding and conversion; SU 24: Scientific research and development **Technical function of the substance:** photochemical Tonnage of substance for that use: tonnes/year Substance supplied to that use: in a mixture Subsequent service life relevant for that use: yes Link to the subsequent service life: Service life of laser-imaged coated articles used by consumers.COPY; Service life of laser-imaged coated articles in industrial settings.COPY; Service life of laser-imaged coated articles in professional settings.COPY Related assessment: use not assessed
IW-4	**Industrial use of ammonium octamolybdate in the production of starch and derived starch products (Processing aid)** 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 : **- 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 9: Transfer of substance or mixture into small containers (dedicated filling line, including weighing)** **- PROC 26: Handling of solid inorganic substances at ambient temperature** **- PROC28: Manufacture of machinery** **Sector of end use:** SU 4: Manufacture of food products; SU 9: Manufacture of fine chemicals **Technical function of the substance:** processing aid Tonnage of substance for that use: tonnes/year Limited number of sites: Migrated value from IUCLID 5.6 to IUCLID 6: 1-10 sites Substance supplied to that use: in a mixture Subsequent service life relevant for that use: no Remarks: The substance is used as processing aid. Approx. % concentration within the process is 0.1.%

	For competition reasons a tonnage indication is not included, but is available to ECHA upon request to the Molybdenum Consortium at sief@molybdenumconsortium.org. Related assessment: use not assessed
IW-6	**Intermediate use of ammonium octamolybdate in the manufacture of starch and derived starch products** Further description of the use: Contributing activity/technique for the environment : **- ERC6a: Use of intermediate** 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 9: Transfer of substance or mixture into small containers (dedicated filling line, including weighing)** **- PROC 26: Handling of solid inorganic substances at ambient temperature** **- PROC28: Manual maintenance (cleaning and repair) of machinery** **Sector of end use:** SU 4: Manufacture of food products; SU 9: Manufacture of fine chemicals **Technical function of the substance:** intermediate (precursor) Tonnage of substance for that use: tonnes/year Limited number of sites: Migrated value from IUCLID 5.6 to IUCLID 6: 1-10 sites Substance supplied to that use: in a mixture Subsequent service life relevant for that use: no Remarks: The substance is used as reactant. Approx. % concentration within the process is 0.1.% For competition reasons a tonnage indication is not included, but is available to ECHA upon request to the Molybdenum Consortium at sief@molybdenumconsortium.org. Related assessment: use not assessed
IW-2	**Industrial use of ammonium octamolybdate in plastics for laser-imaging** Further description of the use: Plastics containing AOM are used in laser imaging. Contributing activity/technique for the environment : **- ERC5: Use at industrial site leading to inclusion into/onto article** Contributing activity/technique for the workers : **- 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 14: Tabletting, compression, extrusion, pelletisation, granulation** **- PROC 15: Use as laboratory reagent** **- PROC 26: Handling of solid inorganic substances at ambient temperature** **- PROC28: Manual maintenance (cleaning and repair) of machinery** **Product Category used:** PC 32: Polymer preparations and compounds **Sector of end use:** SU 5: Manufacture of textiles, leather, fur; SU 6a: Manufacture of wood and wood products; SU 6b: Manufacture of pulp, paper and paper products; SU 7: Printing and reproduction of recorded media; SU 11: Manufacture of rubber products; SU 12: Manufacture of plastics products, including compounding and conversion; SU 24: Scientific research and development

	Technical function of the substance: photochemical Tonnage of substance for that use: tonnes/year Substance supplied to that use: in a mixture Subsequent service life relevant for that use: yes Link to the subsequent service life: Service life of laser-imaged plastics in professional settings.COPY; Service life of laser-imaged plastics used by consumers.COPY; Service life of laser-imaged plastics in industrial settings.COPY Related assessment: use not assessed
IW-3	**Industrial use of ammonium octamolybdate in paper for laser imaging** Further description of the use: Paper containing AOM is used in laser imaging. Contributing activity/technique for the environment : **- ERC5: Use at industrial site leading to inclusion into/onto article** Contributing activity/technique for the workers : **- 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 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 26: Handling of solid inorganic substances at ambient temperature** **- PROC28: Manual maintenance (cleaning and repair) of machinery** **Product Category used:** PC 26: Paper and board treatment products; PC 34: Textile dyes, and impregnating products **Sector of end use:** SU 5: Manufacture of textiles, leather, fur; SU 6a: Manufacture of wood and wood products; SU 6b: Manufacture of pulp, paper and paper products; SU 7: Printing and reproduction of recorded media; SU 11: Manufacture of rubber products; SU 12: Manufacture of plastics products, including compounding and conversion; SU 24: Scientific research and development **Technical function of the substance:** photochemical Tonnage of substance for that use: tonnes/year Substance supplied to that use: in a mixture Subsequent service life relevant for that use: yes Link to the subsequent service life: Service life of laser-imaged paper in industrial settings.COPY; Service life of laser-imaged paper used by consumers.COPY; Service life of laser-imaged paper in professional settings.COPY Related assessment: use not assessed
IW-5	**Industrial use of ammonium octamolybdate as smoke suppressant/flame retardant** Further description of the use: The substance is blended with a polymer, plasticiser and other mineral fillers then calendered into a thin sheet. This sheet is then laminated between other layers (not containing AOM) to form a flooring product. 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 6: Calendering operations**

	- PROC 26: Handling of solid inorganic substances at ambient temperature **- PROC28: Manual maintenance (cleaning and repair) of machinery** **Product Category used:** PC 32: Polymer preparations and compounds **Technical function of the substance:** flame retardant Tonnage of substance for that use: tonnes/year Substance supplied to that use: in a mixture Subsequent service life relevant for that use: yes Link to the subsequent service life: Service life of smoke suppressant/flame retardant plastic articles used by consumers.COPY; Service life of smoke suppressant/flame retardant plastic articles in industrial settings.COPY; Service life of smoke suppressant/flame retardant plastic articles in professional settings.COPY Remarks: A single downstream user with one site reported this use, also indicating the flooring product has recently been discontinued. For competition reasons a tonnage indication is not included, but is available to ECHA upon request to the Molybdenum Consortium at sief@molybdenumconsortium.org . Related assessment: use not assessed

Table 8. Article service life

	Article service life
SL-2	**Service life of laser-imaged coated articles in industrial settings** Further description of the use: Coated substrates containing laser images are used, e.g. in packaging applications. Article used by: workers Substance intended to be released from article: **Article category related to subsequent service life (AC):** AC 5: Fabrics, textiles and apparel; AC 8: Paper articles; AC 10: Rubber articles; AC 11: Wood articles; AC 13: Plastic articles Contributing activity/technique for the environment: **- ERC12c: Use of articles at industrial sites with low release** Contributing activity/technique for consumers: Contributing activity/technique for the workers: **- 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** **Technical function of the substance:** photochemical Tonnage of substance for that use: tonnes/year Related assessment: use not assessed
SL-1	**Service life of laser-imaged coated articles in professional settings** Further description of the use: Coated substrates containing laser images are used, e.g. in packaging applications. Article used by: workers Substance intended to be released from article: **Article category related to subsequent service life (AC):** AC 5: Fabrics, textiles and apparel; AC 8: Paper articles; AC 10: Rubber articles; AC 11: Wood articles; AC 13: Plastic articles Contributing activity/technique for the environment: **- ERC10a: Widespread use of articles with low release (outdoor)** **- ERC11a: Widespread use of articles with low release (indoor)** Contributing activity/technique for consumers: Contributing activity/technique for the workers:

	- 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** **Technical function of the substance:** photochemical Tonnage of substance for that use: tonnes/year Related assessment: use not assessed
SL-12	**Service life of laser-imaged coated articles used by consumers** Further description of the use: Coated substrates containing laser images are used, e.g. in packaging applications. Article used by: consumers Substance intended to be released from article: **Article category related to subsequent service life (AC):** Contributing activity/technique for the environment: **- ERC10a: Widespread use of articles with low release (outdoor)** **- ERC11a: Widespread use of articles with low release (indoor)** Contributing activity/technique for consumers: **- AC 5: Fabrics, textiles and apparel; AC 8: Paper articles; AC 10: Rubber articles; AC 11: Wood articles; AC 13: Plastic articles** Contributing activity/technique for the workers: **Technical function of the substance:** photochemical Tonnage of substance for that use: tonnes/year Related assessment: use not assessed
SL-5	**Service life of laser-imaged plastics in industrial settings** Further description of the use: Plastics containing laser images are used, e.g. in packaging applications. Article used by: workers Substance intended to be released from article: **Article category related to subsequent service life (AC):** AC 10: Rubber articles; AC 13: Plastic articles Contributing activity/technique for the environment: **- ERC12c: Use of articles at industrial sites with low release** Contributing activity/technique for consumers: Contributing activity/technique for the workers: **- PROC 21: Low energy manipulation of substances bound in materials and/or articles** **Technical function of the substance:** photochemical Tonnage of substance for that use: tonnes/year Related assessment: use not assessed
SL-4	**Service life of laser-imaged plastics in professional settings** Further description of the use: Plastics containing laser images are used, e.g. in packaging applications. Article used by: workers Substance intended to be released from article: **Article category related to subsequent service life (AC):** AC 10: Rubber articles; AC 13: Plastic articles Contributing activity/technique for the environment: **- ERC10a: Widespread use of articles with low release (outdoor)** **- ERC11a: Widespread use of articles with low release (indoor)** Contributing activity/technique for consumers: Contributing activity/technique for the workers: **- PROC 21: Low energy manipulation of substances bound in materials and/or articles**

	Technical function of the substance: photochemical Tonnage of substance for that use: tonnes/year Related assessment: use not assessed
SL-6	**Service life of laser-imaged plastics used by consumers** Further description of the use: Plastics containing laser images are used, e.g. in packaging applications. Article used by: consumers Substance intended to be released from article: **Article category related to subsequent service life (AC):** Contributing activity/technique for the environment: **- ERC10a: Widespread use of articles with low release (outdoor)** **- ERC11a: Widespread use of articles with low release (indoor)** Contributing activity/technique for consumers: **- AC 10: Rubber articles; AC 13: Plastic articles** Contributing activity/technique for the workers: **Technical function of the substance:** photochemical Tonnage of substance for that use: tonnes/year Related assessment: use not assessed
SL-8	**Service life of laser-imaged paper in industrial settings** Further description of the use: Paper containing laser images is used, e.g. in packaging applications. Article used by: workers Substance intended to be released from article: **Article category related to subsequent service life (AC):** AC 8: Paper articles Contributing activity/technique for the environment: **- ERC12c: Use of articles at industrial sites with low release** Contributing activity/technique for consumers: Contributing activity/technique for the workers: **- PROC 21: Low energy manipulation of substances bound in materials and/or articles** **Technical function of the substance:** photochemical Tonnage of substance for that use: tonnes/year Related assessment: use not assessed
SL-7	**Service life of laser-imaged paper in professional settings** Further description of the use: Paper containing laser images is used, e.g. in packaging applications. Article used by: workers Substance intended to be released from article: **Article category related to subsequent service life (AC):** AC 8: Paper articles Contributing activity/technique for the environment: **- ERC10a: Widespread use of articles with low release (outdoor)** **- ERC11a: Widespread use of articles with low release (indoor)** Contributing activity/technique for consumers: Contributing activity/technique for the workers: **- PROC 21: Low energy manipulation of substances bound in materials and/or articles** **Technical function of the substance:** photochemical Tonnage of substance for that use: tonnes/year Related assessment: use not assessed
SL-9	**Service life of laser-imaged paper used by consumers**

	Further description of the use: Paper containing laser images is used, e.g. in packaging applications. Article used by: consumers Substance intended to be released from article: **Article category related to subsequent service life (AC):** Contributing activity/technique for the environment: **- ERC10a: Widespread use of articles with low release (outdoor)** **- ERC11a: Widespread use of articles with low release (indoor)** Contributing activity/technique for consumers: **- AC 8: Paper articles** Contributing activity/technique for the workers: **Technical function of the substance:** photochemical Tonnage of substance for that use: tonnes/year Related assessment: use not assessed
SL-11	**Service life of smoke suppressant/flame retardant plastic articles in industrial settings** Further description of the use: Vinyl flooring Article used by: workers Substance intended to be released from article: **Article category related to subsequent service life (AC):** AC 13: Plastic articles Contributing activity/technique for the environment: **- ERC12c: Use of articles at industrial sites with low release** Contributing activity/technique for consumers: Contributing activity/technique for the workers: **- PROC 21: Low energy manipulation of substances bound in materials and/or articles** **Technical function of the substance:** flame retardant Tonnage of substance for that use: 1 tonnes/year Related assessment: use not assessed
SL-10	**Service life of smoke suppressant/flame retardant plastic articles in professional settings** Further description of the use: Vinyl flooring Article used by: workers Substance intended to be released from article: **Article category related to subsequent service life (AC):** AC 13: Plastic articles Contributing activity/technique for the environment: **- ERC11a: Widespread use of articles with low release (indoor)** Contributing activity/technique for consumers: Contributing activity/technique for the workers: **- PROC 21: Low energy manipulation of substances bound in materials and/or articles** **Technical function of the substance:** flame retardant Tonnage of substance for that use: 1 tonnes/year Related assessment: use not assessed
SL-12	**Service life of smoke suppressant/flame retardant plastic articles used by consumers** Further description of the use: Vinyl flooring Article used by: consumers Substance intended to be released from article: **Article category related to subsequent service life (AC):**

	Contributing activity/technique for the environment: **- ERC11a: Widespread use of articles with low release (indoor)** Contributing activity/technique for consumers: **- AC 13: Plastic articles** Contributing activity/technique for the workers: **Technical function of the substance:** flame retardant Tonnage of substance for that use: 1 tonnes/year Related assessment: use not assessed

2.3. Uses advised against

Table 9**. Uses at industrial sites advised against**

	Uses at industrial sites advised against
IW-1	**REACH Restriction limiting the use of inorganic ammonium salts in cellulose insulation** Further description of the use: Annex XVII to Regulation (EC) No 1907/2006 (REACH), entry 65 restricts the use of inorganic ammonium salts in cellulose insulation. The use is permitted only if certain conditions are met, as follows (cited from REACH Annex XVII): Inorganic ammonium salts… "1. Shall not be placed on the market, or used, in cellulose insulation mixtures or cellulose insulation articles after 14 July 2018 unless the emission of ammonia from those mixtures or articles results in a concentration of less than 3 ppm by volume (2,12 mg/m3) under the test conditions specified in paragraph 4. A supplier of a cellulose insulation mixture containing inorganic ammonium salts shall inform the recipient or consumer of the maximum permissible loading rate of the cellulose insulation mixture, expressed in thickness and density. A downstream user of a cellulose insulation mixture containing inorganic ammonium salts shall ensure that the maximum permissible loading rate communicated by the supplier is not exceeded. 2. By way of derogation, paragraph 1 shall not apply to placing on the market of cellulose insulation mixtures intended to be used solely for the production of cellulose insulation articles, or to the use of those mixtures in the production of cellulose insulation articles. 3. In the case of a Member State that, on 14 July 2016, has national provisional measures in place that have been authorised by the Commission pursuant to Article 129(2)(a), the provisions of paragraphs 1 and 2 shall apply from that date. 4. Compliance with the emission limit specified in the first subparagraph of paragraph 1 shall be demonstrated in accordance with Technical Specification CEN/TS 16516, adapted as follows: (a) the duration of the test shall be at least 14 days instead of 28 days; (b) the ammonia gas emission shall be measured at least once per day throughout the test; (c) the emission limit shall not be reached or exceeded in any measurement taken during the test; (d) the relative humidity shall be 90 % instead of 50 %; (e) an appropriate method to measure the ammonia gas emission shall be used; (f) the loading rate, expressed in thickness and density, shall be recorded during the sampling of the cellulose insulation mixtures or articles to be tested."