**SCENARIU DE EXPUNERE PENTRU COMUNICARE**

**Denumirea substanţei:** calcium chloride

**numărul CE:** 233-140-8

**Număr CAS:** 10043-52-4

**Număr de Înregistrare:**

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**Cap. 1. ES 1: Producere**

**1.1. Titlu secţiune**

Denumirea SE: Manufacture

|  |  |
| --- | --- |
| **Mediu** |  |
| 1: *Manufacturing of substances* | ERC 1 |
| **Lucrător** |  |
| 2: *Chemical production in closed process without likelihood of exposure or in containment conditions or processes with equivalent containment condition* | PROC 1 |
| 3: *Chemical production in closed continuous process with occasional controlled exposure or processes with equivalent containment condition* | PROC 2 |
| 4: *Manufacture in closed batch processes with occasional controlled exposure or processes with equivalent containment condition* | PROC 3 |
| 5: Chemical production where opportunity for exposure arises | PROC 4 |
| 6: *Transfer of a substance or mixture during process sampling at dedicated facilities* | PROC 8b, PROC 26 |
| 7: *Transfer of a substance or mixture during process sampling at non-dedicated facilities* | PROC 8a, PROC 26 |
| 8: *Transfer of substance or mixture into small containers (dedicated filling line, including weighing)* | PROC 9, PROC 26 |
| 9: Tabletting, compression, extrusion, pelettisation, granulation | PROC 14 |
| 10: Use as laboratory reagent | PROC 15, PROC 26 |
| 11: *Transfer of substance or mixture (charging/discharging) at non dedicated-facilities* | PROC 8a, PROC 26 |
| 12: *Transfer of substance or mixture (charging/discharging) at dedicated-facilities* | PROC 8b, PROC 26 |
| 13: *Equipment cleaning and maintenance at non-dedicated facility* | PROC 8a, PROC 28 |
| 14: Handling of solid inorganic substances at ambient temperature | PROC 26 |
| 15: *Manual maintenance (cleaning and repair) of machinery at non-dedicated facility* | PROC 28 |

**1.2. Condiţii de utilizare care afectează expunerea**

**1.2.1. Controlul expunerii lucrătorilor**

**Condiții de utilizare aplicabile tuturor scenariilor contributive**

|  |
| --- |
| **Caracteristicile produsului (articolului)** |
| Covers concentrations up to 100 % |
| *Solid, medium dustiness. Covers also liquid form* |
| **Cantitatea utilizată (sau conţinută în articole), frecvenţa şi durata utilizării/expunerii** |
| Covers use up to 8 h/day |
| **Condiţii şi măsuri tehnice şi organizaţionale** |
| Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour). |
| Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision. |
| **Condiţii şi măsuri legate de protecţia personală, igienă şi evaluarea stării de sănătate** |
| Use suitable eye protection. |
| Wear chemically resistant gloves (tested to EN374) in combination with ‘basic’ employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS. |
| **Alte condiţii care afectează expunerea lucrătorilor** |
| Indoor use |
| Assumes process temperature up to 20 °C |

**1.3. Estimarea expunerii şi trimitere la sursa acesteia**

**1.3.1. Expunerea lucrătorilor: *Chemical production in closed process without likelihood of exposure or in containment conditions or processes with equivalent containment condition* (PROC 1)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 1.774 mg/m³ (Date măsurate) | 0.355 |
| Prin inhalare, local, acut | 1.774 mg/m³ (Date măsurate) | 0.177 |

**1.3.2. Expunerea lucrătorilor: *Chemical production in closed continuous process with occasional controlled exposure or processes with equivalent containment condition* (PROC 2)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 1.774 mg/m³ (Date măsurate) | 0.355 |
| Prin inhalare, local, acut | 1.774 mg/m³ (Date măsurate) | 0.177 |

**1.3.3. Expunerea lucrătorilor: *Manufacture in closed batch processes with occasional controlled exposure or processes with equivalent containment condition* (PROC 3)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 1.774 mg/m³ (Date măsurate) | 0.355 |
| Prin inhalare, local, acut | 1.774 mg/m³ (Date măsurate) | 0.177 |

**1.3.4. Expunerea lucrătorilor: Chemical production where opportunity for exposure arises (PROC 4)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 1.881 mg/m³ (Date măsurate) | 0.376 |
| Prin inhalare, local, acut | 1.881 mg/m³ (Date măsurate) | 0.188 |

**1.3.5. Expunerea lucrătorilor: *Transfer of a substance or mixture during process sampling at dedicated facilities* (PROC 8b, PROC 26)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 2.742 mg/m³ (Date măsurate) | 0.548 |
| Prin inhalare, local, acut | 2.742 mg/m³ (Date măsurate) | 0.274 |

**1.3.6. Expunerea lucrătorilor: *Transfer of a substance or mixture during process sampling at non-dedicated facilities* (PROC 8a, PROC 26)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 2.742 mg/m³ (Date măsurate) | 0.548 |
| Prin inhalare, local, acut | 2.742 mg/m³ (Date măsurate) | 0.274 |

**1.3.7. Expunerea lucrătorilor: *Transfer of substance or mixture into small containers (dedicated filling line, including weighing)* (PROC 9, PROC 26)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 2.742 mg/m³ (Date măsurate) | 0.548 |
| Prin inhalare, local, acut | 2.742 mg/m³ (Date măsurate) | 0.274 |

**1.3.8. Expunerea lucrătorilor: Tabletting, compression, extrusion, pelettisation, granulation (PROC 14)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 2.742 mg/m³ (Date măsurate) | 0.548 |
| Prin inhalare, local, acut | 2.742 mg/m³ (Date măsurate) | 0.274 |

**1.3.9. Expunerea lucrătorilor: Use as laboratory reagent (PROC 15, PROC 26)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 1.774 mg/m³ (Date măsurate) | 0.355 |
| Prin inhalare, local, acut | 1.774 mg/m³ (Date măsurate) | 0.177 |

**1.3.10. Expunerea lucrătorilor: *Transfer of substance or mixture (charging/discharging) at non dedicated-facilities* (PROC 8a, PROC 26)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 2.742 mg/m³ (Date măsurate) | 0.548 |
| Prin inhalare, local, acut | 2.742 mg/m³ (Date măsurate) | 0.274 |

**1.3.11. Expunerea lucrătorilor: *Transfer of substance or mixture (charging/discharging) at dedicated-facilities* (PROC 8b, PROC 26)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 2.742 mg/m³ (Date măsurate) | 0.548 |
| Prin inhalare, local, acut | 2.742 mg/m³ (Date măsurate) | 0.274 |

**1.3.12. Expunerea lucrătorilor: *Equipment cleaning and maintenance at non-dedicated facility* (PROC 8a, PROC 28)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 2.742 mg/m³ (Date măsurate) | 0.548 |
| Prin inhalare, local, acut | 2.742 mg/m³ (Date măsurate) | 0.274 |

**1.3.13. Expunerea lucrătorilor: Handling of solid inorganic substances at ambient temperature (PROC 26)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 2.742 mg/m³ (Date măsurate) | 0.548 |
| Prin inhalare, local, acut | 2.742 mg/m³ (Date măsurate) | 0.274 |

**1.3.14. Expunerea lucrătorilor: *Manual maintenance (cleaning and repair) of machinery at non-dedicated facility* (PROC 28)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 2.742 mg/m³ (Date măsurate) | 0.548 |
| Prin inhalare, local, acut | 2.742 mg/m³ (Date măsurate) | 0.274 |

**1.4. Ghid pentru utilizatorul din aval în vederea stabilirii dacă îşi desfăşoară activitatea în limitele prevăzute de SE**

**Cap. 2. ES 2: Formulare sau reambalare**

**2.1. Titlu secţiune**

Denumirea SE: Formulation or re-packing; Distribution of substance

|  |  |
| --- | --- |
| **Mediu** |  |
| 1: Formulation into mixture | ERC 2 |
| **Lucrător** |  |
| 2: *Chemical production in closed process without likelihood of exposure or in containment conditions.* | PROC 1 |
| 3: *Chemical production in closed continuous process with occasional controlled exposure.* | PROC 2 |
| 4: *Formulation in closed batch processes with occasional controlled exposure.* | PROC 3 |
| 5: *Chemical production where opportunity for exposure arises* | PROC 4 |
| 6: Mixing or blending in batch processes | PROC 5 |
| 7: *Transfer of a substance or mixture during process sampling at dedicated facilities* | PROC 8b, PROC 26 |
| 8: *Transfer of a substance or mixture during process sampling at non-dedicated facilities* | PROC 8a, PROC 26 |
| 9: *Transfer of substance or mixture into small containers (dedicated filling line, including weighing)* | PROC 9, PROC 26 |
| 10: Use as laboratory reagent | PROC 15, PROC 26 |
| 11: Tabletting, compression, extrusion, pelettisation, granulation | PROC 14 |
| 12: *Transfer of substance or mixture (charging/discharging) at non dedicated-facilities* | PROC 8a, PROC 26 |
| 13: *Transfer of substance or mixture (charging/discharging) at dedicated-facilities* | PROC 8b, PROC 26 |
| 14: *Equipment cleaning and maintenance at non-dedicated facility* | PROC 8a, PROC 28 |
| 15: Manual maintenance (cleaning and repair) of machinery | PROC 28 |

**2.2. Condiţii de utilizare care afectează expunerea**

**2.2.1. Controlul expunerii lucrătorilor**

**Condiții de utilizare aplicabile tuturor scenariilor contributive**

|  |
| --- |
| **Caracteristicile produsului (articolului)** |
| Covers concentrations up to 100 % |
| *Solid, medium dustiness. Covers also liquid form* |
| **Condiţii şi măsuri tehnice şi organizaţionale** |
| Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision. |
| **Condiţii şi măsuri legate de protecţia personală, igienă şi evaluarea stării de sănătate** |
| Wear chemically resistant gloves (tested to EN374) in combination with ‘basic’ employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS. |
| *Use suitable eye protection.* |
| **Alte condiţii care afectează expunerea lucrătorilor** |
| Indoor use |
| Assumes process temperature up to 20 °C |

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**Condiții specifice de utilizare pentru fiecare scenariu contributiv**

|  |  |
| --- | --- |
| **Scenariu contributiv** | **Măsuri specifice** |
| ***Chemical production in closed process without likelihood of exposure or in containment conditions.* (PROC 1)** | Covers use up to 8 h/day  Provide a basic standard of general ventilation (1 to 3 air changes per hour). |
| ***Chemical production in closed continuous process with occasional controlled exposure.* (PROC 2)** | Covers use up to 8 h/day  Provide a basic standard of general ventilation (1 to 3 air changes per hour). |
| ***Formulation in closed batch processes with occasional controlled exposure.* (PROC 3)** | Covers use up to 8 h/day  Provide a basic standard of general ventilation (1 to 3 air changes per hour). |
| ***Chemical production where opportunity for exposure arises* (PROC 4)** | Covers use up to 8 h/day  Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).  *Respiratory protection (APF of 10) is to be worn in those case where there is potential for peak exposure. Alternatively, good general ventilation with a minimum of 5-10 air changes per air can be applied.* |
| **Mixing or blending in batch processes (PROC 5)** | Covers use up to 8 h/day  Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).  *Respiratory protection (APF of 10) is to be worn in those case where there is potential for peak exposure. Alternatively, good general ventilation with a minimum of 5-10 air changes per air can be applied.* |
| ***Transfer of a substance or mixture during process sampling at dedicated facilities* (PROC 8b, PROC 26)** | Covers use up to 8 h/day  Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour). |
| ***Transfer of a substance or mixture during process sampling at non-dedicated facilities* (PROC 8a, PROC 26)** | Covers use up to 1 h/day  Provide a basic standard of general ventilation (1 to 3 air changes per hour).  *Respiratory protection (APF of 10) is to be worn in those case where there is potential for peak exposure. Alternatively, good general ventilation with a minimum of 5-10 air changes per air can be applied.* |
| ***Transfer of substance or mixture into small containers (dedicated filling line, including weighing)* (PROC 9, PROC 26)** | Covers use up to 8 h/day  Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).  *Respiratory protection (APF of 10) is to be worn in those case where there is potential for peak exposure. Alternatively, good general ventilation with a minimum of 5-10 air changes per air can be applied.* |
| **Use as laboratory reagent (PROC 15, PROC 26)** | Covers use up to 8 h/day  Provide a basic standard of general ventilation (1 to 3 air changes per hour). |
| **Tabletting, compression, extrusion, pelettisation, granulation (PROC 14)** | Covers use up to 8 h/day  Provide a basic standard of general ventilation (1 to 3 air changes per hour). |
| ***Transfer of substance or mixture (charging/discharging) at non dedicated-facilities* (PROC 8a, PROC 26)** | Covers use up to 8 h/day  Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).  *Respiratory protection (APF of 10) is to be worn in those case where there is potential for peak exposure. Alternatively, good general ventilation with a minimum of 5-10 air changes per air can be applied.* |
| ***Transfer of substance or mixture (charging/discharging) at dedicated-facilities* (PROC 8b, PROC 26)** | Covers use up to 8 h/day  Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour). |
| ***Equipment cleaning and maintenance at non-dedicated facility* (PROC 8a, PROC 28)** | Covers use up to 8 h/day  Provide a basic standard of general ventilation (1 to 3 air changes per hour).  *Handle substance within a closed system [ES47] Drain down and flush system prior to equipment break-in or maintenance [E55] Transfer via enclosed lines [E52]*  *Respiratory protection (APF of 10) is to be worn in those case where there is potential for peak exposure. Alternatively, good general ventilation with a minimum of 5-10 air changes per air can be applied.* |
| **Manual maintenance (cleaning and repair) of machinery (PROC 28)** | Covers use up to 8 h/day  Provide a basic standard of general ventilation (1 to 3 air changes per hour).  *Handle substance within a closed system [ES47] Drain down and flush system prior to equipment break-in or maintenance [E55] Transfer via enclosed lines [E52]*  *Respiratory protection (APF of 10) is to be worn in those case where there is potential for peak exposure. Alternatively, good general ventilation with a minimum of 5-10 air changes per air can be applied.* |

**2.3. Estimarea expunerii şi trimitere la sursa acesteia**

**2.3.1. Expunerea lucrătorilor: *Chemical production in closed process without likelihood of exposure or in containment conditions.* (PROC 1)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.01 mg/m³ (TRA Workers 3.0) | < 0.01 |
| Prin inhalare, local, acut | 0.04 mg/m³ (TRA Workers 3.0) | < 0.01 |

**2.3.2. Expunerea lucrătorilor: *Chemical production in closed continuous process with occasional controlled exposure.* (PROC 2)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.5 mg/m³ (TRA Workers 3.0) | 0.1 |
| Prin inhalare, local, acut | 2 mg/m³ (TRA Workers 3.0) | 0.2 |

**2.3.3. Expunerea lucrătorilor: *Formulation in closed batch processes with occasional controlled exposure.* (PROC 3)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 1 mg/m³ (TRA Workers 3.0) | 0.2 |
| Prin inhalare, local, acut | 4 mg/m³ (TRA Workers 3.0) | 0.4 |

**2.3.4. Expunerea lucrătorilor: *Chemical production where opportunity for exposure arises* (PROC 4)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.35 mg/m³ (TRA Workers 3.0) | 0.07 |
| Prin inhalare, local, acut | 1.4 mg/m³ (TRA Workers 3.0) | 0.14 |

**2.3.5. Expunerea lucrătorilor: Mixing or blending in batch processes (PROC 5)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.35 mg/m³ (TRA Workers 3.0) | 0.07 |
| Prin inhalare, local, acut | 1.4 mg/m³ (TRA Workers 3.0) | 0.14 |

**2.3.6. Expunerea lucrătorilor: *Transfer of a substance or mixture during process sampling at dedicated facilities* (PROC 8b, PROC 26)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.7 mg/m³ (TRA Workers 3.0) | 0.14 |
| Prin inhalare, local, acut | 2.8 mg/m³ (TRA Workers 3.0) | 0.28 |

**2.3.7. Expunerea lucrătorilor: *Transfer of a substance or mixture during process sampling at non-dedicated facilities* (PROC 8a, PROC 26)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.1 mg/m³ (TRA Workers 3.0) | 0.02 |
| Prin inhalare, local, acut | 2 mg/m³ (TRA Workers 3.0) | 0.2 |

**2.3.8. Expunerea lucrătorilor: *Transfer of substance or mixture into small containers (dedicated filling line, including weighing)* (PROC 9, PROC 26)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.35 mg/m³ (TRA Workers 3.0) | 0.07 |
| Prin inhalare, local, acut | 1.4 mg/m³ (TRA Workers 3.0) | 0.14 |

**2.3.9. Expunerea lucrătorilor: Use as laboratory reagent (PROC 15, PROC 26)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.5 mg/m³ (TRA Workers 3.0) | 0.1 |
| Prin inhalare, local, acut | 2 mg/m³ (TRA Workers 3.0) | 0.2 |

**2.3.10. Expunerea lucrătorilor: Tabletting, compression, extrusion, pelettisation, granulation (PROC 14)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 1 mg/m³ (TRA Workers 3.0) | 0.2 |
| Prin inhalare, local, acut | 4 mg/m³ (TRA Workers 3.0) | 0.4 |

**2.3.11. Expunerea lucrătorilor: *Transfer of substance or mixture (charging/discharging) at non dedicated-facilities* (PROC 8a, PROC 26)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.35 mg/m³ (TRA Workers 3.0) | 0.07 |
| Prin inhalare, local, acut | 1.4 mg/m³ (TRA Workers 3.0) | 0.14 |

**2.3.12. Expunerea lucrătorilor: *Transfer of substance or mixture (charging/discharging) at dedicated-facilities* (PROC 8b, PROC 26)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.7 mg/m³ (TRA Workers 3.0) | 0.14 |
| Prin inhalare, local, acut | 2.8 mg/m³ (TRA Workers 3.0) | 0.28 |

**2.3.13. Expunerea lucrătorilor: *Equipment cleaning and maintenance at non-dedicated facility* (PROC 8a, PROC 28)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.5 mg/m³ (TRA Workers 3.0) | 0.1 |
| Prin inhalare, local, acut | 2 mg/m³ (TRA Workers 3.0) | 0.2 |

**2.3.14. Expunerea lucrătorilor: Manual maintenance (cleaning and repair) of machinery (PROC 28)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.5 mg/m³ (PROC 8a estimate used to cover PROC 28) | 0.1 |
| Prin inhalare, local, acut | 2 mg/m³ (PROC 8a estimate used to cover PROC 28) | 0.2 |

**2.4. Ghid pentru utilizatorul din aval în vederea stabilirii dacă îşi desfăşoară activitatea în limitele prevăzute de SE**

**Cap. 3. ES 3: Utilizare în spații industriale; Diferite sectoare (SU 1, SU 2a, SU 2b, SU 4, SU 5, SU 6b, SU 8, SU 9, SU 11, SU 12, SU 13, SU 14, SU 15, SU 16, SU 17)**

**3.1. Titlu secţiune**

Denumirea SE: *Use at industrial site (e.g. Industrial Indoor use as Chemical Intermediate and Process aid, Industrial Outdoor use)*

Sectorul de utilizare: Agricultură, exploatare silvică, pescuit (SU 1), Minerit (exclusiv activităţi de exploatare maritimă) (SU 2a), Activităţi de exploatare maritimă (SU 2b), Industria alimentară (SU 4), Producţia de textile, piele, blană (SU 5), Producţia celulozei, hârtiei şi produselor din hârtie (SU 6b), Producţia în masă, la scară largă substanţelor chimice (inclusiv produse petroliere) (SU 8), Producţia produselor chimice fine (SU 9), Fabricarea articolelor din cauciuc (SU 11), Fabricarea produselor din plastic, inclusiv compoundarea şi conversia (SU 12), Fabricarea altor produse minerale nemetalice, de exemplu mortare, ciment (SU 13), Fabricarea metalelor de bază, inclusiv a aliajelor (SU 14), Fabricarea produselor din metal, exclusiv maşini şi utilaje (SU 15), Fabricarea calculatoarelor, produselor electronice şi optice, echipamentelor electrice (SU 16), Producţia cu caracter general, de exemplu maşini, echipamente, vehicule, alte echipamente de transport. (SU 17)

|  |  |
| --- | --- |
| **Mediu** |  |
| 1: Use as an intermediate | ERC 6a |
| 2: Use of non-reactive processing aid at industrial site (no inclusion into or onto article) | ERC 4 |
| **Lucrător** |  |
| 3: *Chemical production in closed process without likelihood of exposure or in containment conditions or processes with equivalent containment conditions* | PROC 1 |
| 4: *Chemical production in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions* | PROC 2 |
| 5: *Manufacture or formulation in closed batch processes with occasional controlled exposure or processes with equivalent containment condition* | PROC 3 |
| 6: Chemical production where opportunity for exposure arises | PROC 4 |
| 7: Mixing or blending in batch processes | PROC 5 |
| 8: Calendering operations | PROC 6 |
| 9: Indoor use; Industrial spraying; Solid in solution | PROC 7 |
| 10: Outdoor use; Industrial spraying | PROC 7 |
| 11: Outdoor use; Industrial spraying | PROC 7 |
| 12: *Transfer of a substance or mixture during process sampling at non-dedicated facilities with a local exhaust ventilation* | PROC 8a, PROC 26 |
| 13: *Transfer of a substance or mixture during process sampling at non-dedicated facilities without a local exhaust ventilation* | PROC 8a, PROC 26 |
| 14: *Transfer of a substance or mixture during process sampling at dedicated facilities with a local exhaust ventilation* | PROC 8b, PROC 26 |
| 15: *Transfer of a substance or mixture during process sampling at dedicated facilities without a local exhaust ventilation* | PROC 8b, PROC 26 |
| 16: *Transfer of substance or mixture (charging/discharging) at non-dedicated facilities with a local exhaust ventilation.* | PROC 8a, PROC 26 |
| 17: *Transfer of substance or mixture (charging/discharging) at non-dedicated facilities without a local exhaust ventilation.* | PROC 8a, PROC 26 |
| 18: *Transfer of substance or mixture (charging/discharging) at dedicated facilities with a local exhaust ventilation.* | PROC 8b, PROC 26 |
| 19: *Transfer of substance or mixture (charging/discharging) at dedicated facilities without a local exhaust ventilation.* | PROC 8b, PROC 26 |
| 20: *Equipment cleaning and maintenance at non-dedicated facility* | PROC 8a, PROC 28 |
| 21: *Transfer of substance or mixture into small containers (dedicated filling line, including weighing) at facilities with a local exhaust ventilation* | PROC 9, PROC 26, PROC 27b |
| 22: *Transfer of substance or mixture into small containers (dedicated filling line, including weighing) at facilities without a local exhaust ventilation* | PROC 9, PROC 26 |
| 23: Roller application or brushing | PROC 10 |
| 24: Treatment of articles by dipping and pouring | PROC 13 |
| 25: Tabletting, compression, extrusion, pelettisation, granulation | PROC 14 |
| 26: Use as laboratory reagent | PROC 15, PROC 26, PROC 27b |
| 27: *Manufacturing and processing of minerals and/or metals at substantially elevated temperature (> melting point - High fugacity)* | PROC 22, PROC 27a |
| 28: *Manufacturing and processing of minerals and/or metals at substantially elevated temperature (>= melting point. Medium fugacity)* | PROC 22, PROC 27a |
| 29: *Open processing and transfer operations at substantially elevated temperature (=< melting point - Medium fugacity)* | PROC 23, PROC 27a |
| 30: *Open processing and transfer operations at substantially elevated temperature (> melting point - High fugacity)* | PROC 23, PROC 27a |
| 31: *Manual maintenance (cleaning and repair) of machinery at noon-dedicated facilities* | PROC 28 |

**3.2. Condiţii de utilizare care afectează expunerea**

**3.2.1. Controlul expunerii lucrătorilor**

**Condiții de utilizare aplicabile tuturor scenariilor contributive**

|  |
| --- |
| **Condiţii şi măsuri tehnice şi organizaţionale** |
| Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision. |
| **Condiţii şi măsuri legate de protecţia personală, igienă şi evaluarea stării de sănătate** |
| Wear chemically resistant gloves (tested to EN374) in combination with ‘basic’ employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS. |
| *Use suitable eye protection.* |
| **Alte condiţii care afectează expunerea lucrătorilor** |
| Assumes process temperature up to 20 °C |

​

**Condiții specifice de utilizare pentru fiecare scenariu contributiv**

|  |  |
| --- | --- |
| **Scenariu contributiv** | **Măsuri specifice** |
| ***Chemical production in closed process without likelihood of exposure or in containment conditions or processes with equivalent containment conditions* (PROC 1)** | Covers concentrations up to 100 %  *Solid, medium dustiness. Covers also liquid form*  Covers use up to 8 h/day  Provide a basic standard of general ventilation (1 to 3 air changes per hour).  Indoor use |
| ***Chemical production in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions* (PROC 2)** | Covers concentrations up to 100 %  *Solid, medium dustiness. Covers also liquid form*  Covers use up to 8 h/day  Provide a basic standard of general ventilation (1 to 3 air changes per hour).  Indoor use |
| ***Manufacture or formulation in closed batch processes with occasional controlled exposure or processes with equivalent containment condition* (PROC 3)** | Covers concentrations up to 100 %  *Solid, medium dustiness. Covers also liquid form*  Covers use up to 8 h/day  Provide a basic standard of general ventilation (1 to 3 air changes per hour).  Indoor use |
| **Chemical production where opportunity for exposure arises (PROC 4)** | Covers concentrations up to 100 %  *Solid, medium dustiness. Covers also liquid form*  Covers use up to 8 h/day  Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).  Local exhaust ventilation; Inhalation - minimum efficiency of 90 %  Indoor use |
| **Mixing or blending in batch processes (PROC 5)** | Covers concentrations up to 100 %  *Solid, medium dustiness. Covers also liquid form*  Covers use up to 8 h/day  Wear suitable respiratory protection.; Inhalation - minimum efficiency of 90 %; For further specification, refer to section 8 of the SDS.  Outdoor use |
| **Calendering operations (PROC 6)** | Covers concentrations up to 100 %  *Solid, medium dustiness. Covers also liquid form*  Covers use up to 8 h/day  Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).  *Respiratory protection (APF of 10) is to be worn in those case where there is potential for peak exposure. Alternatively, good general ventilation with a minimum of 5-10 air changes per air can be applied.*  Indoor use |
| **Indoor use; Industrial spraying; Solid in solution (PROC 7)** | Covers concentrations up to 35 %  *Physical form of the product is assumed as liquid, this is conservative as it is a solid in a liquid with a very low vapour pressure.*  Covers use up to 2 h/day  Provide a basic standard of general ventilation (1 to 3 air changes per hour).  *Covers exposure in the presence of local exhaust ventilation of minimum 95% efficiency or respiratory protection with minimum 90% efficiency (e.g. APF of10)*  *covers spraying with moderate application rate (0.3-3 L/minute)*  *Covers spraying direction only horizontal or downward*  Indoor use |
| **Outdoor use; Industrial spraying (PROC 7)** | Covers concentrations up to 35 %  *Physical form of the product is assumed as liquid, this is conservative as it is a solid in a liquid with a very low vapour pressure.*  Covers use up to 0.25 h/day  *Covers activity where the primary emission source is located in the breathing zone of the worker (i.e. the volume of air within 1 metre in any direction of the worker’s head)*  *covers any spraying direction*  *covers spraying with high compressed air*  *covers high spraying application rate (> 3 L/minute)*  *Covers spraying activity wearing respiratory protection with minimum efficiency of 95% (i.e. APF of 20)*  Outdoor use |
| **Outdoor use; Industrial spraying (PROC 7)** | Covers concentrations up to 35 %  *Physical form of the product is assumed as liquid, this is conservative as it is a solid in a liquid with a very low vapour pressure.*  Covers use up to 2 h/day  *Covers activity where the primary emission source is located out the breathing zone of the worker (i.e. the volume of air is more than 1 metre in any direction of the worker’s head)*  *Covers spraying direction only horizontal or downward*  *covers spraying with high compressed air*  *covers high spraying application rate (> 3 L/minute)*  Outdoor use  *covers partial personal enclosure (e.g. truck cabin)* |
| ***Transfer of a substance or mixture during process sampling at non-dedicated facilities with a local exhaust ventilation* (PROC 8a, PROC 26)** | Covers concentrations up to 100 %  *Solid, medium dustiness. Covers also liquid form*  Covers use up to 1 h/day  Local exhaust ventilation; Inhalation - minimum efficiency of 90 %  Provide a basic standard of general ventilation (1 to 3 air changes per hour).  Indoor use |
| ***Transfer of a substance or mixture during process sampling at non-dedicated facilities without a local exhaust ventilation* (PROC 8a, PROC 26)** | Covers concentrations up to 100 %  *Solid, medium dustiness. Covers also liquid form*  Covers use up to 1 h/day  Provide a basic standard of general ventilation (1 to 3 air changes per hour).  *Respiratory protection (APF of 10) is to be worn in those case where there is potential for peak exposure. Alternatively, good general ventilation with a minimum of 5-10 air changes per air can be applied.*  Indoor use |
| ***Transfer of a substance or mixture during process sampling at dedicated facilities with a local exhaust ventilation* (PROC 8b, PROC 26)** | Covers concentrations up to 100 %  *Solid, medium dustiness. Covers also liquid form*  Covers use up to 8 h/day  Local exhaust ventilation; Inhalation - minimum efficiency of 95 %  Provide a basic standard of general ventilation (1 to 3 air changes per hour).  Indoor use |
| ***Transfer of a substance or mixture during process sampling at dedicated facilities without a local exhaust ventilation* (PROC 8b, PROC 26)** | Covers concentrations up to 100 %  *Solid, medium dustiness. Covers also liquid form*  Covers use up to 8 h/day  Provide a basic standard of general ventilation (1 to 3 air changes per hour).  Indoor use |
| ***Transfer of substance or mixture (charging/discharging) at non-dedicated facilities with a local exhaust ventilation.* (PROC 8a, PROC 26)** | Covers concentrations up to 100 %  *Solid, medium dustiness. Covers also liquid form*  Covers use up to 8 h/day  Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).  Local exhaust ventilation; Inhalation - minimum efficiency of 90 %  Indoor use |
| ***Transfer of substance or mixture (charging/discharging) at non-dedicated facilities without a local exhaust ventilation.* (PROC 8a, PROC 26)** | Covers concentrations up to 100 %  *Solid, medium dustiness. Covers also liquid form*  Covers use up to 8 h/day  Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).  *Respiratory protection (APF of 10) is to be worn in those case where there is potential for peak exposure. Alternatively, good general ventilation with a minimum of 5-10 air changes per air can be applied.*  Indoor or outdoor use |
| ***Transfer of substance or mixture (charging/discharging) at dedicated facilities with a local exhaust ventilation.* (PROC 8b, PROC 26)** | Covers concentrations up to 100 %  *Solid, medium dustiness. Covers also liquid form*  Covers use up to 8 h/day  Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).  Local exhaust ventilation; Inhalation - minimum efficiency of 95 %  Indoor use |
| ***Transfer of substance or mixture (charging/discharging) at dedicated facilities without a local exhaust ventilation.* (PROC 8b, PROC 26)** | Covers concentrations up to 100 %  *Solid, medium dustiness. Covers also liquid form*  Covers use up to 8 h/day  Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).  Indoor or outdoor use |
| ***Equipment cleaning and maintenance at non-dedicated facility* (PROC 8a, PROC 28)** | Covers concentrations up to 100 %  *Solid, medium dustiness. Covers also liquid form*  Covers use up to 8 h/day  Provide a basic standard of general ventilation (1 to 3 air changes per hour).  Local exhaust ventilation; Inhalation - minimum efficiency of 90 %  *Handle substance within a closed system [ES47] Drain down and flush system prior to equipment break-in or maintenance [E55] Transfer via enclosed lines [E52]*  Indoor use |
| ***Transfer of substance or mixture into small containers (dedicated filling line, including weighing) at facilities with a local exhaust ventilation* (PROC 9, PROC 26, PROC 27b)** | Covers concentrations up to 100 %  *Solid, medium dustiness. Covers also liquid form*  Covers use up to 8 h/day  Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).  Local exhaust ventilation; Inhalation - minimum efficiency of 90 %  Indoor use |
| ***Transfer of substance or mixture into small containers (dedicated filling line, including weighing) at facilities without a local exhaust ventilation* (PROC 9, PROC 26)** | Covers concentrations up to 100 %  *Solid, medium dustiness. Covers also liquid form*  Covers use up to 8 h/day  Provide a basic standard of general ventilation (1 to 3 air changes per hour).  *Respiratory protection (APF of 10) is to be worn in those case where there is potential for peak exposure. Alternatively, good general ventilation with a minimum of 5-10 air changes per air can be applied.*  Indoor or outdoor use |
| **Roller application or brushing (PROC 10)** | Covers concentrations up to 100 %  *Solid, medium dustiness. Covers also liquid form*  Covers use up to 8 h/day  Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).  *Respiratory protection (APF of 10) is to be worn in those case where there is potential for peak exposure. Alternatively, good general ventilation with a minimum of 5-10 air changes per air can be applied.*  Indoor use |
| **Treatment of articles by dipping and pouring (PROC 13)** | Solid, medium dustiness  *Solid, medium dustiness. Covers also liquid form*  Covers use up to 8 h/day  Provide a basic standard of general ventilation (1 to 3 air changes per hour).  Indoor use |
| **Tabletting, compression, extrusion, pelettisation, granulation (PROC 14)** | Covers concentrations up to 100 %  *Solid, medium dustiness. Covers also liquid form*  Covers use up to 8 h/day  Provide a basic standard of general ventilation (1 to 3 air changes per hour).  Indoor use |
| **Use as laboratory reagent (PROC 15, PROC 26, PROC 27b)** | Covers concentrations up to 100 %  *Solid, medium dustiness. Covers also liquid form*  Covers use up to 8 h/day  Provide a basic standard of general ventilation (1 to 3 air changes per hour).  Indoor use |
| ***Manufacturing and processing of minerals and/or metals at substantially elevated temperature (> melting point - High fugacity)* (PROC 22, PROC 27a)** | Covers concentrations up to 100 %  *Solid, medium dustiness. Covers also liquid form*  Covers use up to 8 h/day  Provide a basic standard of general ventilation (1 to 3 air changes per hour).  Local exhaust ventilation; Inhalation - minimum efficiency of 90 %  Indoor use |
| ***Manufacturing and processing of minerals and/or metals at substantially elevated temperature (>= melting point. Medium fugacity)* (PROC 22, PROC 27a)** | Covers concentrations up to 100 %  *Solid, medium dustiness. Covers also liquid form*  Covers use up to 8 h/day  Provide a basic standard of general ventilation (1 to 3 air changes per hour).  Local exhaust ventilation; Inhalation - minimum efficiency of 90 %  Indoor use |
| ***Open processing and transfer operations at substantially elevated temperature (=< melting point - Medium fugacity)* (PROC 23, PROC 27a)** | Covers concentrations up to 100 %  *Solid, medium dustiness. Covers also liquid form*  Covers use up to 8 h/day  Provide a basic standard of general ventilation (1 to 3 air changes per hour).  Indoor use |
| ***Open processing and transfer operations at substantially elevated temperature (> melting point - High fugacity)* (PROC 23, PROC 27a)** | Covers concentrations up to 100 %  *Solid, medium dustiness. Covers also liquid form*  Covers use up to 8 h/day  Provide a good standard of controlled ventilation (5 to 10 air changes per hour).  Local exhaust ventilation; Inhalation - minimum efficiency of 90 %  Indoor use |
| ***Manual maintenance (cleaning and repair) of machinery at noon-dedicated facilities* (PROC 28)** | Covers concentrations up to 100 %  *Solid, medium dustiness. Covers also liquid form*  Covers use up to 8 h/day  Provide a basic standard of general ventilation (1 to 3 air changes per hour).  Local exhaust ventilation; Inhalation - minimum efficiency of %  *Handle substance within a closed system [ES47] Drain down and flush system prior to equipment break-in or maintenance [E55] Transfer via enclosed lines [E52]*  Indoor use |

**3.3. Estimarea expunerii şi trimitere la sursa acesteia**

**3.3.1. Expunerea lucrătorilor: *Chemical production in closed process without likelihood of exposure or in containment conditions or processes with equivalent containment conditions* (PROC 1)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.01 mg/m³ (TRA Workers 3.0) | < 0.01 |
| Prin inhalare, local, acut | 0.04 mg/m³ (TRA Workers 3.0) | < 0.01 |

**3.3.2. Expunerea lucrătorilor: *Chemical production in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions* (PROC 2)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.5 mg/m³ (TRA Workers 3.0) | 0.1 |
| Prin inhalare, local, acut | 2 mg/m³ (TRA Workers 3.0) | 0.2 |

**3.3.3. Expunerea lucrătorilor: *Manufacture or formulation in closed batch processes with occasional controlled exposure or processes with equivalent containment condition* (PROC 3)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 1 mg/m³ (TRA Workers 3.0) | 0.2 |
| Prin inhalare, local, acut | 4 mg/m³ (TRA Workers 3.0) | 0.4 |

**3.3.4. Expunerea lucrătorilor: Chemical production where opportunity for exposure arises (PROC 4)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.35 mg/m³ (TRA Workers 3.0) | 0.07 |
| Prin inhalare, local, acut | 1.4 mg/m³ (TRA Workers 3.0) | 0.14 |

**3.3.5. Expunerea lucrătorilor: Mixing or blending in batch processes (PROC 5)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.35 mg/m³ (TRA Workers 3.0) | 0.07 |
| Prin inhalare, local, acut | 1.4 mg/m³ (TRA Workers 3.0) | 0.14 |

**3.3.6. Expunerea lucrătorilor: Calendering operations (PROC 6)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.35 mg/m³ (TRA Workers 3.0) | 0.07 |
| Prin inhalare, local, acut | 1.4 mg/m³ (TRA Workers 3.0) | 0.14 |

**3.3.7. Expunerea lucrătorilor: Indoor use; Industrial spraying; Solid in solution (PROC 7)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 1.2 mg/m³ (ART) | 0.24 |
| Prin inhalare, local, acut | 9.6 mg/m³ (ART) | 0.96 |

**3.3.8. Expunerea lucrătorilor: Outdoor use; Industrial spraying (PROC 7)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 1.2 mg/m³ (ART) | 0.24 |
| Prin inhalare, local, acut | 9.6 mg/m³ (ART) | 0.96 |

**3.3.9. Expunerea lucrătorilor: Outdoor use; Industrial spraying (PROC 7)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 1.2 mg/m³ (ART) | 0.24 |
| Prin inhalare, local, acut | 9.6 mg/m³ (ART) | 0.96 |

**3.3.10. Expunerea lucrătorilor: *Transfer of a substance or mixture during process sampling at non-dedicated facilities with a local exhaust ventilation* (PROC 8a, PROC 26)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.1 mg/m³ (TRA Workers 3.0) | 0.02 |
| Prin inhalare, local, acut | 2 mg/m³ (TRA Workers 3.0) | 0.2 |

**3.3.11. Expunerea lucrătorilor: *Transfer of a substance or mixture during process sampling at non-dedicated facilities without a local exhaust ventilation* (PROC 8a, PROC 26)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.1 mg/m³ (TRA Workers 3.0) | 0.02 |
| Prin inhalare, local, acut | 2 mg/m³ (TRA Workers 3.0) | 0.2 |

**3.3.12. Expunerea lucrătorilor: *Transfer of a substance or mixture during process sampling at dedicated facilities with a local exhaust ventilation* (PROC 8b, PROC 26)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.05 mg/m³ (TRA Workers 3.0) | 0.01 |
| Prin inhalare, local, acut | 0.2 mg/m³ (TRA Workers 3.0) | 0.02 |

**3.3.13. Expunerea lucrătorilor: *Transfer of a substance or mixture during process sampling at dedicated facilities without a local exhaust ventilation* (PROC 8b, PROC 26)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 1 mg/m³ (TRA Workers 3.0) | 0.2 |
| Prin inhalare, local, acut | 4 mg/m³ (TRA Workers 3.0) | 0.4 |

**3.3.14. Expunerea lucrătorilor: *Transfer of substance or mixture (charging/discharging) at non-dedicated facilities with a local exhaust ventilation.* (PROC 8a, PROC 26)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.35 mg/m³ (TRA Workers 3.0) | 0.07 |
| Prin inhalare, local, acut | 1.4 mg/m³ (TRA Workers 3.0) | 0.14 |

**3.3.15. Expunerea lucrătorilor: *Transfer of substance or mixture (charging/discharging) at non-dedicated facilities without a local exhaust ventilation.* (PROC 8a, PROC 26)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.35 mg/m³ (TRA Workers 3.0) | 0.07 |
| Prin inhalare, local, acut | 1.4 mg/m³ (TRA Workers 3.0) | 0.14 |

**3.3.16. Expunerea lucrătorilor: *Transfer of substance or mixture (charging/discharging) at dedicated facilities with a local exhaust ventilation.* (PROC 8b, PROC 26)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.035 mg/m³ (TRA Workers 3.0) | < 0.01 |
| Prin inhalare, local, acut | 0.14 mg/m³ (TRA Workers 3.0) | 0.014 |

**3.3.17. Expunerea lucrătorilor: *Transfer of substance or mixture (charging/discharging) at dedicated facilities without a local exhaust ventilation.* (PROC 8b, PROC 26)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.7 mg/m³ (TRA Workers 3.0) | 0.14 |
| Prin inhalare, local, acut | 2.8 mg/m³ (TRA Workers 3.0) | 0.28 |

**3.3.18. Expunerea lucrătorilor: *Equipment cleaning and maintenance at non-dedicated facility* (PROC 8a, PROC 28)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.5 mg/m³ (TRA Workers 3.0) | 0.1 |
| Prin inhalare, local, acut | 2 mg/m³ (TRA Workers 3.0) | 0.2 |

**3.3.19. Expunerea lucrătorilor: *Transfer of substance or mixture into small containers (dedicated filling line, including weighing) at facilities with a local exhaust ventilation* (PROC 9, PROC 26, PROC 27b)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.35 mg/m³ (TRA Workers 3.0) | 0.07 |
| Prin inhalare, local, acut | 1.4 mg/m³ (TRA Workers 3.0) | 0.14 |

**3.3.20. Expunerea lucrătorilor: *Transfer of substance or mixture into small containers (dedicated filling line, including weighing) at facilities without a local exhaust ventilation* (PROC 9, PROC 26)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.5 mg/m³ (TRA Workers 3.0) | 0.1 |
| Prin inhalare, local, acut | 2 mg/m³ (TRA Workers 3.0) | 0.2 |

**3.3.21. Expunerea lucrătorilor: Roller application or brushing (PROC 10)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.35 mg/m³ (TRA Workers 3.0) | 0.07 |
| Prin inhalare, local, acut | 1.4 mg/m³ (TRA Workers 3.0) | 0.14 |

**3.3.22. Expunerea lucrătorilor: Treatment of articles by dipping and pouring (PROC 13)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 1 mg/m³ (TRA Workers 3.0) | 0.2 |
| Prin inhalare, local, acut | 4 mg/m³ (TRA Workers 3.0) | 0.4 |

**3.3.23. Expunerea lucrătorilor: Tabletting, compression, extrusion, pelettisation, granulation (PROC 14)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 1 mg/m³ (TRA Workers 3.0) | 0.2 |
| Prin inhalare, local, acut | 4 mg/m³ (TRA Workers 3.0) | 0.4 |

**3.3.24. Expunerea lucrătorilor: Use as laboratory reagent (PROC 15, PROC 26, PROC 27b)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.5 mg/m³ (TRA Workers 3.0) | 0.1 |
| Prin inhalare, local, acut | 2 mg/m³ (TRA Workers 3.0) | 0.2 |

**3.3.25. Expunerea lucrătorilor: *Manufacturing and processing of minerals and/or metals at substantially elevated temperature (> melting point - High fugacity)* (PROC 22, PROC 27a)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.1 mg/m³ (TRA Workers 3.0) | 0.02 |
| Prin inhalare, local, acut | 0.4 mg/m³ (TRA Workers 3.0) | 0.04 |

**3.3.26. Expunerea lucrătorilor: *Manufacturing and processing of minerals and/or metals at substantially elevated temperature (>= melting point. Medium fugacity)* (PROC 22, PROC 27a)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.1 mg/m³ (TRA Workers 3.0) | 0.02 |
| Prin inhalare, local, acut | 0.4 mg/m³ (TRA Workers 3.0) | 0.04 |

**3.3.27. Expunerea lucrătorilor: *Open processing and transfer operations at substantially elevated temperature (=< melting point - Medium fugacity)* (PROC 23, PROC 27a)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 1 mg/m³ (TRA Workers 3.0) | 0.2 |
| Prin inhalare, local, acut | 4 mg/m³ (TRA Workers 3.0) | 0.4 |

**3.3.28. Expunerea lucrătorilor: *Open processing and transfer operations at substantially elevated temperature (> melting point - High fugacity)* (PROC 23, PROC 27a)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.03 mg/m³ (TRA Workers 3.0) | < 0.01 |
| Prin inhalare, local, acut | 0.12 mg/m³ (TRA Workers 3.0) | 0.012 |

**3.3.29. Expunerea lucrătorilor: *Manual maintenance (cleaning and repair) of machinery at noon-dedicated facilities* (PROC 28)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.5 mg/m³ (ECETOC TRA Workers) | 0.1 |
| Prin inhalare, local, acut | 2 mg/m³ (ECETOC TRA Workers) | 0.2 |

**3.4. Ghid pentru utilizatorul din aval în vederea stabilirii dacă îşi desfăşoară activitatea în limitele prevăzute de SE**

Instrument de standardizare: For the evaluation of spraying activities the ART (Advanced Reach Tool) modeling tool has been used. In case the DU cannot demonstrate safe use with the conditions currently presented in this SDS Annex, the ART modeling Tool can be used as scaling tool.

**Cap. 4. ES 4: Utilizare larg răspândită de către lucrători profesioniști; Diferite sectoare (SU 0, SU 1, SU 13, SU 19, SU 20)**

**4.1. Titlu secţiune**

Denumirea SE: Professional use; Indoor use

Sectorul de utilizare: Altele (SU 0), Agricultură, exploatare silvică, pescuit (SU 1), Fabricarea altor produse minerale nemetalice, de exemplu mortare, ciment (SU 13), Lucrări de construcţii (SU 19), Servicii de sănătate (SU 20)

|  |  |
| --- | --- |
| **Mediu** |  |
| 1: Indoor use; Professional use | ERC 8a |
| **Lucrător** |  |
| 2: *Chemical production in closed process without likelihood of exposure or in containment conditions or processes with equivalent containment conditions* | PROC 1 |
| 3: *Chemical production in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions* | PROC 2 |
| 4: *Manufacture or formulation in closed batch processes with occasional controlled exposure or processes with equivalent containment condition* | PROC 3 |
| 5: Chemical production where opportunity for exposure arises | PROC 4 |
| 6: Mixing or blending in batch processes | PROC 5 |
| 7: *Transfer of substance or mixture (charging/discharging) at non-dedicated facilities* | PROC 8a, PROC 26 |
| 8: *Transfer of substance or mixture (charging/discharging) at dedicated facilities* | PROC 8b, PROC 26 |
| 9: *Transfer of substance or mixture into small containers (dedicated filling line, including weighing)* | PROC 9, PROC 26 |
| 10: Roller application or brushing | PROC 10 |
| 11: Indoor use; Non-industrial spraying; Solid in solution | PROC 11 |
| 12: Use as laboratory reagent | PROC 15, PROC 26 |
| 13: Manual activities involving hand contact | PROC 19 |
| 14: Use of functional fluids in small devices | PROC 20 |
| 15: *Equipment cleaning and maintenance at non-dedicated facility* | PROC 8a, PROC 28 |
| 16: *Manual maintenance (cleaning and repair) of machinery at non-dedicated facility* | PROC 28 |

**4.2. Condiţii de utilizare care afectează expunerea**

**4.2.1. Controlul expunerii lucrătorilor**

**Condiții de utilizare aplicabile tuturor scenariilor contributive**

|  |
| --- |
| **Condiţii şi măsuri legate de protecţia personală, igienă şi evaluarea stării de sănătate** |
| *Use suitable eye protection.* |
| **Alte condiţii care afectează expunerea lucrătorilor** |
| Indoor use |
| Assumes process temperature up to 20 °C |

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**Condiții specifice de utilizare pentru fiecare scenariu contributiv**

|  |  |
| --- | --- |
| **Scenariu contributiv** | **Măsuri specifice** |
| ***Chemical production in closed process without likelihood of exposure or in containment conditions or processes with equivalent containment conditions* (PROC 1)** | Covers concentrations up to 100 %  Solid, medium dustiness  Covers use up to 8 h/day  *Assumes a good basic standard of occupational hygiene is implemented*  Provide a basic standard of general ventilation (1 to 3 air changes per hour).  Wear chemically resistant gloves (tested to EN374) in combination with ‘basic’ employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS. |
| ***Chemical production in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions* (PROC 2)** | Covers concentrations up to 100 %  Solid, medium dustiness  Covers use up to 8 h/day  *Assumes a good basic standard of occupational hygiene is implemented*  Provide a basic standard of general ventilation (1 to 3 air changes per hour).  Wear chemically resistant gloves (tested to EN374) in combination with ‘basic’ employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS. |
| ***Manufacture or formulation in closed batch processes with occasional controlled exposure or processes with equivalent containment condition* (PROC 3)** | Covers concentrations up to 100 %  Solid, medium dustiness  Covers use up to 8 h/day  Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).  Wear chemically resistant gloves (tested to EN374) in combination with ‘basic’ employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS. |
| **Chemical production where opportunity for exposure arises (PROC 4)** | Covers concentrations up to 100 %  Solid, medium dustiness  Covers use up to 8 h/day  *Assumes a good basic standard of occupational hygiene is implemented*  Local exhaust ventilation; Inhalation - minimum efficiency of 80 %  Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).  Wear chemically resistant gloves (tested to EN374) in combination with ‘basic’ employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS. |
| **Mixing or blending in batch processes (PROC 5)** | Covers concentrations up to 100 %  Solid, medium dustiness  Covers use up to 8 h/day  *Assumes a good basic standard of occupational hygiene is implemented*  Local exhaust ventilation; Inhalation - minimum efficiency of 80 %  Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).  Wear chemically resistant gloves (tested to EN374) in combination with ‘basic’ employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS. |
| ***Transfer of substance or mixture (charging/discharging) at non-dedicated facilities* (PROC 8a, PROC 26)** | Covers concentrations up to 100 %  Solid, medium dustiness  Covers use up to 8 h/day  *Assumes a good basic standard of occupational hygiene is implemented*  Local exhaust ventilation; Inhalation - minimum efficiency of 80 %  Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).  Wear chemically resistant gloves (tested to EN374) in combination with ‘basic’ employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS. |
| ***Transfer of substance or mixture (charging/discharging) at dedicated facilities* (PROC 8b, PROC 26)** | Covers concentrations up to 100 %  Solid, medium dustiness  Covers use up to 8 h/day  *Assumes a good basic standard of occupational hygiene is implemented*  Local exhaust ventilation; Inhalation - minimum efficiency of 80 %  Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).  Wear chemically resistant gloves (tested to EN374) in combination with ‘basic’ employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS. |
| ***Transfer of substance or mixture into small containers (dedicated filling line, including weighing)* (PROC 9, PROC 26)** | Covers concentrations up to 100 %  Solid, medium dustiness  Covers use up to 8 h/day  *Assumes a good basic standard of occupational hygiene is implemented*  Local exhaust ventilation; Inhalation - minimum efficiency of 80 %  Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).  Wear chemically resistant gloves (tested to EN374) in combination with ‘basic’ employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS. |
| **Roller application or brushing (PROC 10)** | Covers concentrations up to 100 %  Solid, medium dustiness  Covers use up to 8 h/day  Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision.  Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).  Local exhaust ventilation; Inhalation - minimum efficiency of 90 %  Wear chemically resistant gloves (tested to EN374) in combination with ‘basic’ employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS. |
| **Indoor use; Non-industrial spraying; Solid in solution (PROC 11)** | Covers concentrations up to 35 %  *Physical form of the product is assumed as liquid, this is conservative as it is a solid in a liquid with a very low vapour pressure.*  Covers use up to 2 h/day  Provide a basic standard of general ventilation (1 to 3 air changes per hour).  *Covers exposure in the presence of local exhaust ventilation of minimum 95% efficiency or respiratory protection with minimum 90% efficiency (e.g. APF of10)*  *covers spraying with moderate application rate (0.3-3 L/minute)*  *Covers spraying direction only horizontal or downward*  Wear suitable gloves tested to EN374.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS. |
| **Use as laboratory reagent (PROC 15, PROC 26)** | Covers concentrations up to 100 %  Solid, medium dustiness  Covers use up to 8 h/day  *Assumes a good basic standard of occupational hygiene is implemented*  Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).  Wear chemically resistant gloves (tested to EN374) in combination with ‘basic’ employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS. |
| **Manual activities involving hand contact (PROC 19)** | Covers concentrations up to 100 %  Solid, medium dustiness  Covers use up to 8 h/day  *Assumes a good basic standard of occupational hygiene is implemented*  Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).  Local exhaust ventilation; Inhalation - minimum efficiency of 80 %  Wear chemically resistant gloves (tested to EN374) in combination with ‘basic’ employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS. |
| **Use of functional fluids in small devices (PROC 20)** | Covers concentrations up to 100 %  Solid, medium dustiness  Covers use up to 8 h/day  *Assumes a good basic standard of occupational hygiene is implemented*  Provide a basic standard of general ventilation (1 to 3 air changes per hour).  Wear chemically resistant gloves (tested to EN374) in combination with ‘basic’ employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS. |
| ***Equipment cleaning and maintenance at non-dedicated facility* (PROC 8a, PROC 28)** | Covers concentrations up to 100 %  Solid, medium dustiness  Covers use up to 8 h/day  *Assumes a good basic standard of occupational hygiene is implemented*  Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).  *Handle substance within a closed system [ES47] Drain down and flush system prior to equipment break-in or maintenance [E55] Transfer via enclosed lines [E52]*  Wear chemically resistant gloves (tested to EN374) in combination with ‘basic’ employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.  *Respiratory protection (APF of 10) is to be worn in those case where there is potential for peak exposure. Alternatively, good general ventilation with a minimum of 5-10 air changes per air can be applied.* |
| ***Manual maintenance (cleaning and repair) of machinery at non-dedicated facility* (PROC 28)** | Covers concentrations up to 100 %  Solid, medium dustiness  Covers use up to 8 h/day  *Assumes a good basic standard of occupational hygiene is implemented*  Provide a basic standard of general ventilation (1 to 3 air changes per hour).  Local exhaust ventilation; Inhalation - minimum efficiency of %  *Handle substance within a closed system [ES47] Drain down and flush system prior to equipment break-in or maintenance [E55] Transfer via enclosed lines [E52]*  Wear chemically resistant gloves (tested to EN374) in combination with ‘basic’ employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS. |

**4.3. Estimarea expunerii şi trimitere la sursa acesteia**

**4.3.1. Expunerea lucrătorilor: *Chemical production in closed process without likelihood of exposure or in containment conditions or processes with equivalent containment conditions* (PROC 1)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.01 mg/m³ (TRA Workers 3.0) | < 0.01 |
| Prin inhalare, local, acut | 0.04 mg/m³ (TRA Workers 3.0) | < 0.01 |

**4.3.2. Expunerea lucrătorilor: *Chemical production in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions* (PROC 2)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 1 mg/m³ (TRA Workers 3.0) | 0.2 |
| Prin inhalare, local, acut | 4 mg/m³ (TRA Workers 3.0) | 0.4 |

**4.3.3. Expunerea lucrătorilor: *Manufacture or formulation in closed batch processes with occasional controlled exposure or processes with equivalent containment condition* (PROC 3)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.7 mg/m³ (TRA Workers 3.0) | 0.14 |
| Prin inhalare, local, acut | 2.8 mg/m³ (TRA Workers 3.0) | 0.28 |

**4.3.4. Expunerea lucrătorilor: Chemical production where opportunity for exposure arises (PROC 4)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.7 mg/m³ (TRA Workers 3.0) | 0.14 |
| Prin inhalare, local, acut | 2.8 mg/m³ (TRA Workers 3.0) | 0.28 |

**4.3.5. Expunerea lucrătorilor: Mixing or blending in batch processes (PROC 5)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.7 mg/m³ (TRA Workers 3.0) | 0.14 |
| Prin inhalare, local, acut | 2.8 mg/m³ (TRA Workers 3.0) | 0.28 |

**4.3.6. Expunerea lucrătorilor: *Transfer of substance or mixture (charging/discharging) at non-dedicated facilities* (PROC 8a, PROC 26)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 1.4 mg/m³ (TRA Workers 3.0) | 0.28 |
| Prin inhalare, local, acut | 5.6 mg/m³ (TRA Workers 3.0) | 0.56 |

**4.3.7. Expunerea lucrătorilor: *Transfer of substance or mixture (charging/discharging) at dedicated facilities* (PROC 8b, PROC 26)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.7 mg/m³ (TRA Workers 3.0) | 0.14 |
| Prin inhalare, local, acut | 2.8 mg/m³ (TRA Workers 3.0) | 0.28 |

**4.3.8. Expunerea lucrătorilor: *Transfer of substance or mixture into small containers (dedicated filling line, including weighing)* (PROC 9, PROC 26)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.7 mg/m³ (TRA Workers 3.0) | 0.14 |
| Prin inhalare, local, acut | 2.8 mg/m³ (TRA Workers 3.0) | 0.28 |

**4.3.9. Expunerea lucrătorilor: Roller application or brushing (PROC 10)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.35 mg/m³ (TRA Workers 3.0) | 0.07 |
| Prin inhalare, local, acut | 1.4 mg/m³ (TRA Workers 3.0) | 0.14 |

**4.3.10. Expunerea lucrătorilor: Indoor use; Non-industrial spraying; Solid in solution (PROC 11)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 1.2 mg/m³ (ART) | 0.24 |
| Prin inhalare, local, acut | 9.6 mg/m³ (ART) | 0.96 |

**4.3.11. Expunerea lucrătorilor: Use as laboratory reagent (PROC 15, PROC 26)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.35 mg/m³ (TRA Workers 3.0) | 0.07 |
| Prin inhalare, local, acut | 1.4 mg/m³ (TRA Workers 3.0) | 0.14 |

**4.3.12. Expunerea lucrătorilor: Manual activities involving hand contact (PROC 19)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.7 mg/m³ (TRA Workers 3.0) | 0.14 |
| Prin inhalare, local, acut | 2.8 mg/m³ (TRA Workers 3.0) | 0.28 |

**4.3.13. Expunerea lucrătorilor: Use of functional fluids in small devices (PROC 20)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 1 mg/m³ (TRA Workers 3.0) | 0.2 |
| Prin inhalare, local, acut | 4 mg/m³ (TRA Workers 3.0) | 0.4 |

**4.3.14. Expunerea lucrătorilor: *Equipment cleaning and maintenance at non-dedicated facility* (PROC 8a, PROC 28)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.7 mg/m³ (TRA Workers 3.0) | 0.14 |
| Prin inhalare, local, acut | 2.8 mg/m³ (TRA Workers 3.0) | 0.28 |

**4.3.15. Expunerea lucrătorilor: *Manual maintenance (cleaning and repair) of machinery at non-dedicated facility* (PROC 28)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.7 mg/m³ (ECETOC TRA Workers) | 0.14 |
| Prin inhalare, local, acut | 2.8 mg/m³ (ECETOC TRA Workers) | 0.28 |

**4.4. Ghid pentru utilizatorul din aval în vederea stabilirii dacă îşi desfăşoară activitatea în limitele prevăzute de SE**

Instrument de standardizare: For the evaluation of spraying activities the ART (Advanced Reach Tool) modeling tool has been used. In case the DU cannot demonstrate safe use with the conditions currently presented in this SDS Annex, the ART modeling Tool can be used as scaling tool.

**Cap. 5. ES 5: Utilizare larg răspândită de către lucrători profesioniști; Diferite sectoare (SU 0, SU 1, SU 5, SU 13, SU 19, SU 20)**

**5.1. Titlu secţiune**

Denumirea SE: Professional use; Outdoor use

Sectorul de utilizare: Altele (SU 0), Agricultură, exploatare silvică, pescuit (SU 1), Producţia de textile, piele, blană (SU 5), Fabricarea altor produse minerale nemetalice, de exemplu mortare, ciment (SU 13), Lucrări de construcţii (SU 19), Servicii de sănătate (SU 20)

|  |  |
| --- | --- |
| **Mediu** |  |
| 1: Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) | ERC 8d |
| **Lucrător** |  |
| 2: *Chemical production in closed process without likelihood of exposure or in containment conditions.* | PROC 1 |
| 3: *Chemical production in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions* | PROC 2 |
| 4: *Manufacture or formulation in closed batch processes with occasional controlled exposure or processes with equivalent containment conditions* | PROC 3 |
| 5: Chemical production where opportunity for exposure arises | PROC 4 |
| 6: Mixing or blending in batch processes | PROC 5 |
| 7: *Transfer of substance or mixture (charging/discharging) at non-dedicated facilities* | PROC 8a, PROC 26 |
| 8: *Transfer of substance or mixture (charging/discharging) at dedicated facilities* | PROC 8b, PROC 26 |
| 9: *Transfer of substance or mixture into small containers (dedicated filling line, including weighing)* | PROC 9, PROC 26 |
| 10: Roller application or brushing | PROC 10 |
| 11: Outdoor use; Non-industrial spraying | PROC 11 |
| 12: Outdoor use; Non-industrial spraying | PROC 11 |
| 13: Use as laboratory reagent | PROC 15, PROC 26 |
| 14: Mixing operations; Manual activities involving hand contact | PROC 19 |
| 15: *Equipment cleaning and maintenance at non-dedicated facility* | PROC 8a |
| 16: Use of functional fluids in small devices | PROC 20 |

**5.2. Condiţii de utilizare care afectează expunerea**

**5.2.1. Controlul expunerii lucrătorilor**

**Condiții de utilizare aplicabile tuturor scenariilor contributive**

|  |
| --- |
| **Alte condiţii care afectează expunerea lucrătorilor** |
| Outdoor use |
| Assumes process temperature up to 20 °C |

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**Condiții specifice de utilizare pentru fiecare scenariu contributiv**

|  |  |
| --- | --- |
| **Scenariu contributiv** | **Măsuri specifice** |
| ***Chemical production in closed process without likelihood of exposure or in containment conditions.* (PROC 1)** | Covers concentrations up to 100 %  Solid, medium dustiness  Covers use up to 8 h/day  *Assumes a good basic standard of occupational hygiene is implemented*  Wear chemically resistant gloves (tested to EN374) in combination with ‘basic’ employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.  *Use suitable eye protection* |
| ***Chemical production in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions* (PROC 2)** | Covers concentrations up to 100 %  Solid, medium dustiness  Covers use up to 8 h/day  *Assumes a good basic standard of occupational hygiene is implemented*  Wear chemically resistant gloves (tested to EN374) in combination with ‘basic’ employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.  *Use suitable eye protection* |
| ***Manufacture or formulation in closed batch processes with occasional controlled exposure or processes with equivalent containment conditions* (PROC 3)** | Covers concentrations up to 100 %  Solid, medium dustiness  Covers use up to 8 h/day  *Assumes a good basic standard of occupational hygiene is implemented*  Wear chemically resistant gloves (tested to EN374) in combination with ‘basic’ employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.  *Use suitable eye protection* |
| **Chemical production where opportunity for exposure arises (PROC 4)** | Covers concentrations up to 100 %  Solid, medium dustiness  Covers use up to 8 h/day  *Assumes a good basic standard of occupational hygiene is implemented*  Wear suitable respiratory protection.; Inhalation - minimum efficiency of 90 %; For further specification, refer to section 8 of the SDS.  Wear chemically resistant gloves (tested to EN374) in combination with ‘basic’ employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.  *Use suitable eye protection* |
| **Mixing or blending in batch processes (PROC 5)** | Covers concentrations up to 100 %  Solid, medium dustiness  Covers use up to 8 h/day  *Assumes a good basic standard of occupational hygiene is implemented*  Wear chemically resistant gloves (tested to EN374) in combination with ‘basic’ employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.  Wear suitable respiratory protection.; Inhalation - minimum efficiency of 90 %; For further specification, refer to section 8 of the SDS.  *Use suitable eye protection* |
| ***Transfer of substance or mixture (charging/discharging) at non-dedicated facilities* (PROC 8a, PROC 26)** | Covers concentrations up to 100 %  Solid, medium dustiness  Covers use up to 8 h/day  *Assumes a good basic standard of occupational hygiene is implemented*  Wear chemically resistant gloves (tested to EN374) in combination with ‘basic’ employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.  *Use suitable eye protection*  Wear suitable respiratory protection.; Inhalation - minimum efficiency of 90 %; For further specification, refer to section 8 of the SDS. |
| ***Transfer of substance or mixture (charging/discharging) at dedicated facilities* (PROC 8b, PROC 26)** | Covers concentrations up to 100 %  Solid, medium dustiness  Covers use up to 8 h/day  *Assumes a good basic standard of occupational hygiene is implemented*  Wear chemically resistant gloves (tested to EN374) in combination with ‘basic’ employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.  *Use suitable eye protection*  Wear suitable respiratory protection.; Inhalation - minimum efficiency of 90 %; For further specification, refer to section 8 of the SDS. |
| ***Transfer of substance or mixture into small containers (dedicated filling line, including weighing)* (PROC 9, PROC 26)** | Covers concentrations up to 100 %  Solid, medium dustiness  Covers use up to 8 h/day  *Assumes a good basic standard of occupational hygiene is implemented*  *Use suitable eye protection*  Wear chemically resistant gloves (tested to EN374) in combination with ‘basic’ employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.  Wear suitable respiratory protection.; Inhalation - minimum efficiency of 90 %; For further specification, refer to section 8 of the SDS. |
| **Roller application or brushing (PROC 10)** | Covers concentrations up to 100 %  Solid, medium dustiness  Covers use up to 8 h/day  *Assumes a good basic standard of occupational hygiene is implemented*  Wear chemically resistant gloves (tested to EN374) in combination with ‘basic’ employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.  *Use suitable eye protection*  Wear suitable respiratory protection.; Inhalation - minimum efficiency of 90 %; For further specification, refer to section 8 of the SDS. |
| **Outdoor use; Non-industrial spraying (PROC 11)** | Covers concentrations up to 35 %  *Physical form of the product is assumed as liquid, this is conservative as it is a solid in a liquid with a very low vapour pressure.*  Covers use up to 2 h/day  *Covers activity where the primary emission source is located out the breathing zone of the worker (i.e. the volume of air is more than 1 metre in any direction of the worker’s head)*  Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision.  *Covers spraying direction only horizontal or downward*  *covers spraying with high compressed air*  *covers high spraying application rate (> 3 L/minute)*  *Use suitable eye protection.*  Wear suitable gloves tested to EN374.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.  *covers partial personal enclosure (e.g. truck cabin)* |
| **Outdoor use; Non-industrial spraying (PROC 11)** | Covers concentrations up to 35 %  *Physical form of the product is assumed as liquid, this is conservative as it is a solid in a liquid with a very low vapour pressure.*  Covers use up to 0.25 h/day  *Covers activity where the primary emission source is located in the breathing zone of the worker (i.e. the volume of air within 1 metre in any direction of the worker’s head)*  Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision.  *covers any spraying direction*  *covers spraying with high compressed air*  *covers high spraying application rate (> 3 L/minute)*  *Use suitable eye protection.*  *Covers spraying activity wearing respiratory protection with minimum efficiency of 95% (i.e. APF of 20)*  Wear suitable gloves tested to EN374.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS. |
| **Use as laboratory reagent (PROC 15, PROC 26)** | Covers concentrations up to 100 %  Solid, medium dustiness  Covers use up to 8 h/day  *Assumes a good basic standard of occupational hygiene is implemented*  Wear chemically resistant gloves (tested to EN374) in combination with ‘basic’ employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.  *Use suitable eye protection* |
| **Mixing operations; Manual activities involving hand contact (PROC 19)** | Covers concentrations up to 100 %  Solid, medium dustiness  Covers use up to 8 h/day  *Assumes a good basic standard of occupational hygiene is implemented*  Wear chemically resistant gloves (tested to EN374) in combination with ‘basic’ employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.  *Use suitable eye protection*  Wear suitable respiratory protection.; Inhalation - minimum efficiency of 90 %; For further specification, refer to section 8 of the SDS. |
| ***Equipment cleaning and maintenance at non-dedicated facility* (PROC 8a)** | Covers concentrations up to 100 %  Solid, medium dustiness  Covers use up to 8 h/day  *Assumes a good basic standard of occupational hygiene is implemented*  *Handle substance within a closed system [ES47] Drain down and flush system prior to equipment break-in or maintenance [E55] Transfer via enclosed lines [E52]*  Wear chemically resistant gloves (tested to EN374) in combination with ‘basic’ employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.  *Use suitable eye protection*  Wear suitable respiratory protection.; Inhalation - minimum efficiency of 90 %; For further specification, refer to section 8 of the SDS. |
| **Use of functional fluids in small devices (PROC 20)** | Covers concentrations up to 100 %  Solid, medium dustiness  Covers use up to 8 h/day  *Assumes a good basic standard of occupational hygiene is implemented*  Wear chemically resistant gloves (tested to EN374) in combination with ‘basic’ employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands.; For further specification, refer to section 8 of the SDS.  *Use suitable eye protection* |

**5.3. Estimarea expunerii şi trimitere la sursa acesteia**

**5.3.1. Expunerea lucrătorilor: *Chemical production in closed process without likelihood of exposure or in containment conditions.* (PROC 1)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 7E-3 mg/m³ (TRA Workers 3.0) | < 0.01 |
| Prin inhalare, local, acut | 0.028 mg/m³ (TRA Workers 3.0) | < 0.01 |

**5.3.2. Expunerea lucrătorilor: *Chemical production in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions* (PROC 2)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.7 mg/m³ (TRA Workers 3.0) | 0.14 |
| Prin inhalare, local, acut | 2.8 mg/m³ (TRA Workers 3.0) | 0.28 |

**5.3.3. Expunerea lucrătorilor: *Manufacture or formulation in closed batch processes with occasional controlled exposure or processes with equivalent containment conditions* (PROC 3)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.7 mg/m³ (TRA Workers 3.0) | 0.14 |
| Prin inhalare, local, acut | 2.8 mg/m³ (TRA Workers 3.0) | 0.28 |

**5.3.4. Expunerea lucrătorilor: Chemical production where opportunity for exposure arises (PROC 4)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.35 mg/m³ (TRA Workers 3.0) | 0.07 |
| Prin inhalare, local, acut | 1.4 mg/m³ (TRA Workers 3.0) | 0.14 |

**5.3.5. Expunerea lucrătorilor: Mixing or blending in batch processes (PROC 5)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.35 mg/m³ (TRA Workers 3.0) | 0.07 |
| Prin inhalare, local, acut | 1.4 mg/m³ (TRA Workers 3.0) | 0.14 |

**5.3.6. Expunerea lucrătorilor: *Transfer of substance or mixture (charging/discharging) at non-dedicated facilities* (PROC 8a, PROC 26)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.7 mg/m³ (TRA Workers 3.0) | 0.14 |
| Prin inhalare, local, acut | 2.8 mg/m³ (TRA Workers 3.0) | 0.28 |

**5.3.7. Expunerea lucrătorilor: *Transfer of substance or mixture (charging/discharging) at dedicated facilities* (PROC 8b, PROC 26)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.35 mg/m³ (TRA Workers 3.0) | 0.07 |
| Prin inhalare, local, acut | 1.4 mg/m³ (TRA Workers 3.0) | 0.14 |

**5.3.8. Expunerea lucrătorilor: *Transfer of substance or mixture into small containers (dedicated filling line, including weighing)* (PROC 9, PROC 26)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.35 mg/m³ (TRA Workers 3.0) | 0.07 |
| Prin inhalare, local, acut | 1.4 mg/m³ (TRA Workers 3.0) | 0.14 |

**5.3.9. Expunerea lucrătorilor: Roller application or brushing (PROC 10)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.35 mg/m³ (TRA Workers 3.0) | 0.07 |
| Prin inhalare, local, acut | 1.4 mg/m³ (TRA Workers 3.0) | 0.14 |

**5.3.10. Expunerea lucrătorilor: Outdoor use; Non-industrial spraying (PROC 11)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 1.2 mg/m³ (ART) | 0.24 |
| Prin inhalare, local, acut | 9.6 mg/m³ (ART) | 0.96 |

**5.3.11. Expunerea lucrătorilor: Outdoor use; Non-industrial spraying (PROC 11)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 1.2 mg/m³ (ART) | 0.24 |
| Prin inhalare, local, acut | 9.6 mg/m³ (ART) | 0.96 |

**5.3.12. Expunerea lucrătorilor: Use as laboratory reagent (PROC 15, PROC 26)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.35 mg/m³ (TRA Workers 3.0) | 0.07 |
| Prin inhalare, local, acut | 1.4 mg/m³ (TRA Workers 3.0) | 0.14 |

**5.3.13. Expunerea lucrătorilor: Mixing operations; Manual activities involving hand contact (PROC 19)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.35 mg/m³ (TRA Workers 3.0) | 0.07 |
| Prin inhalare, local, acut | 1.4 mg/m³ (TRA Workers 3.0) | 0.14 |

**5.3.14. Expunerea lucrătorilor: *Equipment cleaning and maintenance at non-dedicated facility* (PROC 8a)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.7 mg/m³ (TRA Workers 3.0) | 0.14 |
| Prin inhalare, local, acut | 2.8 mg/m³ (TRA Workers 3.0) | 0.28 |

**5.3.15. Expunerea lucrătorilor: Use of functional fluids in small devices (PROC 20)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.7 mg/m³ (TRA Workers 3.0) | 0.14 |
| Prin inhalare, local, acut | 2.8 mg/m³ (TRA Workers 3.0) | 0.28 |

**5.4. Ghid pentru utilizatorul din aval în vederea stabilirii dacă îşi desfăşoară activitatea în limitele prevăzute de SE**

Ghid: Application of de-icing agent (mixture of 70% NaCl and 30% of a 20% solution of CaCl2) assumes a fraction of 0.06 of CaCl2 in road salt with an annual tonnage of 0.09 tonnes/km for 25 emission days per year. Application of de-icing agent (liquid CaCl2 brine (max. 35% solution)) assumes a fraction of 0.35 of CaCl2 in road salt with an annual tonnage of 0.28 tonnes/km for 25 emission days per year. Application of Dust suppressor (solid CaCl2 (up to 80%)) assumes a fraction of 0.8 of CaCl2 in road salt with an annual tonnage of 2.4 tonnes/km for 3 emission days per year. Application of Dust suppressor (solid CaCl2 (up to 37%)) assumes a fraction of 0.37 of CaCl2 in road salt with an annual tonnage of 1.11 tonnes/km for 3 emission days per year.

**Cap. 6. ES 6: Utilizare de către consumatori; Diferite produse (PC 0, PC 2, PC 4, PC 12, PC 16, PC 27, PC 35, PC 37)**

**6.1. Titlu secţiune**

Denumirea SE: Consumer use; Indoor or outdoor use

Categoria de produs: Altele (PC 0), Adsorbanţi (PC 2), Produse antigel şi pentru dezgheţare (PC 4), Îngrăşăminte (PC 12), Lichide de transfer al căldurii (PC 16), Produse pentru protecţia plantelor (PC 27), Produse de spălare și curățare (PC 35), Produse chimice de tratare a apei (PC 37)

|  |  |
| --- | --- |
| **Mediu** |  |
| 1: Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) | ERC 8a |
| 2: Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) | ERC 8d |
| **Consumator** |  |
| 3: Dust suppressant; No spraying | PC 0 |
| 4: Dust suppressant; Spraying | PC 0 |
| 5: *Humidity adsorbants* | PC 0 |
| 6: *Cement/concrete/mortar* | PC 0 |
| 7: Adsorbents | PC 2 |
| 8: Anti-freeze and de-icing products; No spraying | PC 4 |
| 9: Anti-freeze and de-icing products; Spraying | PC 4 |
| 10: Fertilizers; No spraying | PC 12 |
| 11: Fertilizers; Spraying | PC 12 |
| 12: Heat transfer fluids | PC 16 |
| 13: Plant protection products; No spraying | PC 27 |
| 14: Plant protection products; Spraying | PC 27 |
| 15: Water treatment chemicals | PC 37 |
| 16: Washing and cleaning products; No spraying | PC 35 |
| 17: Washing and cleaning products; Spraying | PC 35 |

**6.2. Condiţii de utilizare care afectează expunerea**

**6.2.1. Controlul expunerii consumatorilor: Dust suppressant; No spraying (PC 0)**

|  |
| --- |
| **Caracteristicile produsului (articolului)** |
| Covers concentrations up to 100 % |
| *Solid, medium dustiness. Covers also liquid form* |
| **Cantitatea utilizată, frecvenţa şi durata utilizării/expunerii** |
| Covers use up to 1 events per day |
| *Covers use up to 24 h* |
| **Informații și recomandări privind comportamentul, destinate consumatorilor** |
| *Requires room with good ventilation* |
| *Use suitable eye protection. Avoid direct eye contact with product, also via contamination on hands.* |
| **Alte condiţii care afectează expunerea consumatorilor** |
| Release area <= 125 m2 |

**6.2.2. Controlul expunerii consumatorilor: Dust suppressant; Spraying (PC 0)**

|  |
| --- |
| **Caracteristicile produsului (articolului)** |
| Covers concentrations up to 45 % |
| *Physical form of the product is assumed as liquid, this is conservative as it is a solid in a liquid with a very low vapour pressure.* |
| *Covers spraying activity* |
| **Cantitatea utilizată, frecvenţa şi durata utilizării/expunerii** |
| Covers use up to 1 events per day |
| *Covers 10 minutes spraying application* |
| **Informații și recomandări privind comportamentul, destinate consumatorilor** |
| *Requires room with good ventilation* |
| *Use suitable eye protection. Avoid direct eye contact with product, also via contamination on hands.* |

**6.2.3. Controlul expunerii consumatorilor: *Humidity adsorbants* (PC 0)**

|  |
| --- |
| **Caracteristicile produsului (articolului)** |
| Covers concentrations up to 100 % |
| *Solid, medium dustiness. Covers also liquid form* |
| **Cantitatea utilizată, frecvenţa şi durata utilizării/expunerii** |
| Covers use up to 1 events per day |
| *Covers use up to 24 h* |
| **Informații și recomandări privind comportamentul, destinate consumatorilor** |
| *Requires room with good ventilation* |
| *Use suitable eye protection. Avoid direct eye contact with product, also via contamination on hands.* |
| **Alte condiţii care afectează expunerea consumatorilor** |
| Release area <= 125 m2 |

**6.2.4. Controlul expunerii consumatorilor: *Cement/concrete/mortar* (PC 0)**

|  |
| --- |
| **Caracteristicile produsului (articolului)** |
| Covers concentrations up to 100 % |
| *Solid, medium dustiness. Covers also liquid form* |
| **Cantitatea utilizată, frecvenţa şi durata utilizării/expunerii** |
| Covers use up to 1 events per day |
| *Covers use up to 24 h* |
| **Informații și recomandări privind comportamentul, destinate consumatorilor** |
| *Requires room with good ventilation* |
| *Use suitable eye protection. Avoid direct eye contact with product, also via contamination on hands.* |
| **Alte condiţii care afectează expunerea consumatorilor** |
| Release area <= 125 m2 |

**6.2.5. Controlul expunerii consumatorilor: Adsorbents (PC 2)**

|  |
| --- |
| **Caracteristicile produsului (articolului)** |
| Covers concentrations up to 100 % |
| *Solid, medium dustiness. Covers also liquid form* |
| **Cantitatea utilizată, frecvenţa şi durata utilizării/expunerii** |
| Covers use up to 1 events per day |
| *Covers use up to 24 h* |
| **Informații și recomandări privind comportamentul, destinate consumatorilor** |
| *Requires room with good ventilation* |
| *Use suitable eye protection. Avoid direct eye contact with product, also via contamination on hands.* |
| **Alte condiţii care afectează expunerea consumatorilor** |
| Release area <= 125 m2 |

**6.2.6. Controlul expunerii consumatorilor: Anti-freeze and de-icing products; No spraying (PC 4)**

|  |
| --- |
| **Caracteristicile produsului (articolului)** |
| Covers concentrations up to 100 % |
| *Solid, medium dustiness. Covers also liquid form* |
| **Cantitatea utilizată, frecvenţa şi durata utilizării/expunerii** |
| For each use event, covers use amounts up to 5E4 g/event |
| Covers use up to 1 events per day |
| *Covers use up to 24 h* |
| **Informații și recomandări privind comportamentul, destinate consumatorilor** |
| *Requires room with good ventilation* |
| *Use suitable eye protection. Avoid direct eye contact with product, also via contamination on hands.* |
| **Alte condiţii care afectează expunerea consumatorilor** |
| Release area <= 125 m2 |

**6.2.7. Controlul expunerii consumatorilor: Anti-freeze and de-icing products; Spraying (PC 4)**

|  |
| --- |
| **Caracteristicile produsului (articolului)** |
| Covers concentrations up to 45 % |
| *Physical form of the product is assumed as liquid, this is conservative as it is a solid in a liquid with a very low vapour pressure.* |
| *Covers spraying activity* |
| **Cantitatea utilizată, frecvenţa şi durata utilizării/expunerii** |
| Covers use up to 1 events per day |
| *Covers 10 minutes spraying application* |
| **Informații și recomandări privind comportamentul, destinate consumatorilor** |
| *Requires room with good ventilation* |
| *Use suitable eye protection. Avoid direct eye contact with product, also via contamination on hands.* |

**6.2.8. Controlul expunerii consumatorilor: Fertilizers; No spraying (PC 12)**

|  |
| --- |
| **Caracteristicile produsului (articolului)** |
| Covers concentrations up to 100 % |
| *Solid, medium dustiness. Covers also liquid form* |
| **Cantitatea utilizată, frecvenţa şi durata utilizării/expunerii** |
| Covers use up to 1 events per day |
| *Covers use up to 24 h* |
| **Informații și recomandări privind comportamentul, destinate consumatorilor** |
| *Requires room with good ventilation* |
| *Use suitable eye protection. Avoid direct eye contact with product, also via contamination on hands.* |
| **Alte condiţii care afectează expunerea consumatorilor** |
| Release area <= 125 m2 |

**6.2.9. Controlul expunerii consumatorilor: Fertilizers; Spraying (PC 12)**

|  |
| --- |
| **Caracteristicile produsului (articolului)** |
| Covers concentrations up to 45 % |
| *Physical form of the product is assumed as liquid, this is conservative as it is a solid in a liquid with a very low vapour pressure.* |
| *Covers spraying activity* |
| **Cantitatea utilizată, frecvenţa şi durata utilizării/expunerii** |
| Covers use up to 1 events per day |
| *Covers 10 minutes spraying application* |
| **Informații și recomandări privind comportamentul, destinate consumatorilor** |
| *Requires room with good ventilation* |
| *Use suitable eye protection. Avoid direct eye contact with product, also via contamination on hands.* |

**6.2.10. Controlul expunerii consumatorilor: Heat transfer fluids (PC 16)**

|  |
| --- |
| **Caracteristicile produsului (articolului)** |
| Covers concentrations up to 100 % |
| *Solid, medium dustiness. Covers also liquid form* |
| **Cantitatea utilizată, frecvenţa şi durata utilizării/expunerii** |
| Covers use up to 1 events per day |
| *Covers use up to 24 h* |
| **Informații și recomandări privind comportamentul, destinate consumatorilor** |
| *Requires room with good ventilation* |
| *Use suitable eye protection. Avoid direct eye contact with product, also via contamination on hands.* |
| **Alte condiţii care afectează expunerea consumatorilor** |
| Release area <= 125 m2 |

**6.2.11. Controlul expunerii consumatorilor: Plant protection products; No spraying (PC 27)**

|  |
| --- |
| **Caracteristicile produsului (articolului)** |
| Covers concentrations up to 100 % |
| *Solid, medium dustiness. Covers also liquid form* |
| **Cantitatea utilizată, frecvenţa şi durata utilizării/expunerii** |
| Covers use up to 1 events per day |
| *Covers use up to 24 h* |
| **Informații și recomandări privind comportamentul, destinate consumatorilor** |
| *Requires room with good ventilation* |
| *Use suitable eye protection. Avoid direct eye contact with product, also via contamination on hands.* |
| **Alte condiţii care afectează expunerea consumatorilor** |
| Release area <= 125 m2 |

**6.2.12. Controlul expunerii consumatorilor: Plant protection products; Spraying (PC 27)**

|  |
| --- |
| **Caracteristicile produsului (articolului)** |
| Covers concentrations up to 45 % |
| *Physical form of the product is assumed as liquid, this is conservative as it is a solid in a liquid with a very low vapour pressure.* |
| *Covers spraying activity* |
| **Cantitatea utilizată, frecvenţa şi durata utilizării/expunerii** |
| Covers use up to 1 events per day |
| *Covers 10 minutes spraying application* |
| **Informații și recomandări privind comportamentul, destinate consumatorilor** |
| *Requires room with good ventilation* |
| *Use suitable eye protection. Avoid direct eye contact with product, also via contamination on hands.* |

**6.2.13. Controlul expunerii consumatorilor: Water treatment chemicals (PC 37)**

|  |
| --- |
| **Caracteristicile produsului (articolului)** |
| Covers concentrations up to 100 % |
| *Solid, medium dustiness. Covers also liquid form* |
| *Covers exposure via inhalation route* |
| **Cantitatea utilizată, frecvenţa şi durata utilizării/expunerii** |
| Covers use up to 1 events per day |
| *Covers use up to 24 h* |
| **Informații și recomandări privind comportamentul, destinate consumatorilor** |
| *Requires room with good ventilation* |
| *Use suitable eye protection. Avoid direct eye contact with product, also via contamination on hands.* |
| **Alte condiţii care afectează expunerea consumatorilor** |
| Release area <= 125 m2 |

**6.2.14. Controlul expunerii consumatorilor: Washing and cleaning products; No spraying (PC 35)**

|  |
| --- |
| **Caracteristicile produsului (articolului)** |
| Covers concentrations up to 100 % |
| *Solid, medium dustiness. Covers also liquid form* |
| **Cantitatea utilizată, frecvenţa şi durata utilizării/expunerii** |
| Covers use up to 1 events per day |
| *Covers use up to 24 h* |
| **Informații și recomandări privind comportamentul, destinate consumatorilor** |
| *Requires room with good ventilation* |
| *Use suitable eye protection. Avoid direct eye contact with product, also via contamination on hands.* |
| **Alte condiţii care afectează expunerea consumatorilor** |
| Release area <= 125 m2 |

**6.2.15. Controlul expunerii consumatorilor: Washing and cleaning products; Spraying (PC 35)**

|  |
| --- |
| **Caracteristicile produsului (articolului)** |
| Covers concentrations up to 45 % |
| *Physical form of the product is assumed as liquid, this is conservative as it is a solid in a liquid with a very low vapour pressure.* |
| *Covers spraying activity* |
| **Cantitatea utilizată, frecvenţa şi durata utilizării/expunerii** |
| Covers use up to 1 events per day |
| *Covers 10 minutes spraying application* |
| **Informații și recomandări privind comportamentul, destinate consumatorilor** |
| *Requires room with good ventilation* |
| *Use suitable eye protection. Avoid direct eye contact with product, also via contamination on hands.* |

**6.3. Estimarea expunerii şi trimitere la sursa acesteia**

**6.3.1. Expunerea consumatorilor: Dust suppressant; No spraying (PC 0)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 5E-3 mg/m³ (ConsExpo) | < 0.01 |
| Prin inhalare, local, acut | 0.01 mg/m³ (ConsExpo) | < 0.01 |

**6.3.2. Expunerea consumatorilor: Dust suppressant; Spraying (PC 0)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.687 mg/m³ (ConsExpo) | 0.275 |
| Prin inhalare, local, acut | 0.69 mg/m³ (ConsExpo) | 0.138 |

**6.3.3. Expunerea consumatorilor: *Humidity adsorbants* (PC 0)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 5E-3 mg/m³ (ConsExpo) | < 0.01 |
| Prin inhalare, local, acut | 0.01 mg/m³ (ConsExpo) | < 0.01 |

**6.3.4. Expunerea consumatorilor: *Cement/concrete/mortar* (PC 0)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 5E-3 mg/m³ (ConsExpo) | < 0.01 |
| Prin inhalare, local, acut | 0.01 mg/m³ (ConsExpo) | < 0.01 |

**6.3.5. Expunerea consumatorilor: Adsorbents (PC 2)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 5E-3 mg/m³ (ConsExpo) | < 0.01 |
| Prin inhalare, local, acut | 0.01 mg/m³ (ConsExpo) | < 0.01 |

**6.3.6. Expunerea consumatorilor: Anti-freeze and de-icing products; No spraying (PC 4)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 5E-3 mg/m³ (ConsExpo) | < 0.01 |
| Prin inhalare, local, acut | 0.01 mg/m³ (ConsExpo) | < 0.01 |

**6.3.7. Expunerea consumatorilor: Anti-freeze and de-icing products; Spraying (PC 4)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.687 mg/m³ (ConsExpo) | 0.275 |
| Prin inhalare, local, acut | 0.69 mg/m³ (ConsExpo) | 0.138 |

**6.3.8. Expunerea consumatorilor: Fertilizers; No spraying (PC 12)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 5E-3 mg/m³ (ConsExpo) | < 0.01 |
| Prin inhalare, local, acut | 0.01 mg/m³ (ConsExpo) | < 0.01 |

**6.3.9. Expunerea consumatorilor: Fertilizers; Spraying (PC 12)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.687 mg/m³ (ConsExpo) | 0.275 |
| Prin inhalare, local, acut | 0.69 mg/m³ (ConsExpo) | 0.138 |

**6.3.10. Expunerea consumatorilor: Heat transfer fluids (PC 16)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 5E-3 mg/m³ (ConsExpo) | < 0.01 |
| Prin inhalare, local, acut | 0.01 mg/m³ (ConsExpo) | < 0.01 |

**6.3.11. Expunerea consumatorilor: Plant protection products; No spraying (PC 27)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 5E-3 mg/m³ (ConsExpo) | < 0.01 |
| Prin inhalare, local, acut | 0.01 mg/m³ (ConsExpo) | < 0.01 |

**6.3.12. Expunerea consumatorilor: Plant protection products; Spraying (PC 27)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.687 mg/m³ (ConsExpo) | 0.275 |
| Prin inhalare, local, acut | 0.69 mg/m³ (ConsExpo) | 0.138 |

**6.3.13. Expunerea consumatorilor: Water treatment chemicals (PC 37)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 5E-3 mg/m³ (ConsExpo) | < 0.01 |
| Prin inhalare, local, acut | 0.01 mg/m³ (ConsExpo) | < 0.01 |

**6.3.14. Expunerea consumatorilor: Washing and cleaning products; No spraying (PC 35)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 5E-3 mg/m³ (ConsExpo) | < 0.01 |
| Prin inhalare, local, acut | 0.01 mg/m³ (ConsExpo) | < 0.01 |

**6.3.15. Expunerea consumatorilor: Washing and cleaning products; Spraying (PC 35)**

| **Cale de expunere şi tip de efecte** | **Estimarea expunerii** | **RCR** |
| --- | --- | --- |
| Prin inhalare, local, pe termen lung | 0.687 mg/m³ (ConsExpo) | 0.275 |
| Prin inhalare, local, acut | 0.69 mg/m³ (ConsExpo) | 0.138 |

**6.4. Ghid pentru utilizatorul din aval în vederea stabilirii dacă îşi desfăşoară activitatea în limitele prevăzute de SE**