**EDASTATAV KOKKUPUUTESTSENAARIUM**

**Aine nimetus:** calcium chloride

**EÜ number:** 233-140-8

**CAS-number:** 10043-52-4

**Registreerimisnumber:**

**Koostamise/läbivaatamise kuupäev:** 16/04/2020

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**Peatükk 1. ES 1: Tootmine**

**1.1. Pealkirja jaotis**

Kokkupuute-stsenaariumi nimetusIga: Manufacture

|  |  |
| --- | --- |
| **Keskkond** |  |
| 1: *Manufacturing of substances* | ERC 1 |
| **Töötaja** |  |
| 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. Kokkupuudet mõjutavad kasutustingimused**

**1.2.1. Töötaja kokkupuute ohjamine**

**Kõigis kaasstsenaariumides kohaldatavad kasutustingimused**

|  |
| --- |
| **Toote omadused** |
| Covers concentrations up to 100 % |
| *Solid, medium dustiness. Covers also liquid form* |
| **Kasutatud (või tootes sisalduv) kogus, kasutamise/kokkupuute sagedus ja kestus** |
| Covers use up to 8 h/day |
| **Tehnilised ja organisatsioonilised tingimused ja meetmed** |
| 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. |
| **Isikukaitse, hügieeni ja tervisekontrolli tingimused ja meetmed** |
| 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. |
| **Muud töötajate kokkupuudet mõjutavad tingimused** |
| Indoor use |
| Assumes process temperature up to 20 °C |

**1.3. Kokkupuutehindamine ja viide selle allikale**

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 1.774 mg/m³ (Mõõteandmed) | 0.355 |
| Sissehingamise kaudu, lokaalne, akuutne | 1.774 mg/m³ (Mõõteandmed) | 0.177 |

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 1.774 mg/m³ (Mõõteandmed) | 0.355 |
| Sissehingamise kaudu, lokaalne, akuutne | 1.774 mg/m³ (Mõõteandmed) | 0.177 |

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 1.774 mg/m³ (Mõõteandmed) | 0.355 |
| Sissehingamise kaudu, lokaalne, akuutne | 1.774 mg/m³ (Mõõteandmed) | 0.177 |

**1.3.4. Töötaja kokkupuude: Chemical production where opportunity for exposure arises (PROC 4)**

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 1.881 mg/m³ (Mõõteandmed) | 0.376 |
| Sissehingamise kaudu, lokaalne, akuutne | 1.881 mg/m³ (Mõõteandmed) | 0.188 |

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 2.742 mg/m³ (Mõõteandmed) | 0.548 |
| Sissehingamise kaudu, lokaalne, akuutne | 2.742 mg/m³ (Mõõteandmed) | 0.274 |

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 2.742 mg/m³ (Mõõteandmed) | 0.548 |
| Sissehingamise kaudu, lokaalne, akuutne | 2.742 mg/m³ (Mõõteandmed) | 0.274 |

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 2.742 mg/m³ (Mõõteandmed) | 0.548 |
| Sissehingamise kaudu, lokaalne, akuutne | 2.742 mg/m³ (Mõõteandmed) | 0.274 |

**1.3.8. Töötaja kokkupuude: Tabletting, compression, extrusion, pelettisation, granulation (PROC 14)**

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 2.742 mg/m³ (Mõõteandmed) | 0.548 |
| Sissehingamise kaudu, lokaalne, akuutne | 2.742 mg/m³ (Mõõteandmed) | 0.274 |

**1.3.9. Töötaja kokkupuude: Use as laboratory reagent (PROC 15, PROC 26)**

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 1.774 mg/m³ (Mõõteandmed) | 0.355 |
| Sissehingamise kaudu, lokaalne, akuutne | 1.774 mg/m³ (Mõõteandmed) | 0.177 |

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 2.742 mg/m³ (Mõõteandmed) | 0.548 |
| Sissehingamise kaudu, lokaalne, akuutne | 2.742 mg/m³ (Mõõteandmed) | 0.274 |

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 2.742 mg/m³ (Mõõteandmed) | 0.548 |
| Sissehingamise kaudu, lokaalne, akuutne | 2.742 mg/m³ (Mõõteandmed) | 0.274 |

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 2.742 mg/m³ (Mõõteandmed) | 0.548 |
| Sissehingamise kaudu, lokaalne, akuutne | 2.742 mg/m³ (Mõõteandmed) | 0.274 |

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 2.742 mg/m³ (Mõõteandmed) | 0.548 |
| Sissehingamise kaudu, lokaalne, akuutne | 2.742 mg/m³ (Mõõteandmed) | 0.274 |

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 2.742 mg/m³ (Mõõteandmed) | 0.548 |
| Sissehingamise kaudu, lokaalne, akuutne | 2.742 mg/m³ (Mõõteandmed) | 0.274 |

**1.4. Allkasutaja juhend, mille alusel hinnata, kas ta töötab kokkupuutestsenaariumi sätestatud piirides**

**Peatükk 2. ES 2: Segu tootmine või ümberpakendamine**

**2.1. Pealkirja jaotis**

Kokkupuute-stsenaariumi nimetusIga: Formulation or re-packing; Distribution of substance

|  |  |
| --- | --- |
| **Keskkond** |  |
| 1: Formulation into mixture | ERC 2 |
| **Töötaja** |  |
| 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. Kokkupuudet mõjutavad kasutustingimused**

**2.2.1. Töötaja kokkupuute ohjamine**

**Kõigis kaasstsenaariumides kohaldatavad kasutustingimused**

|  |
| --- |
| **Toote omadused** |
| Covers concentrations up to 100 % |
| *Solid, medium dustiness. Covers also liquid form* |
| **Tehnilised ja organisatsioonilised tingimused ja meetmed** |
| Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision. |
| **Isikukaitse, hügieeni ja tervisekontrolli tingimused ja meetmed** |
| 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.* |
| **Muud töötajate kokkupuudet mõjutavad tingimused** |
| Indoor use |
| Assumes process temperature up to 20 °C |

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**Kaasstsenaariumis kohaldatavad erilised kasutustingimused**

|  |  |
| --- | --- |
| **Asjaomane stsenaarium** | **Nõuab erimeetmeid** |
| ***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. Kokkupuutehindamine ja viide selle allikale**

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.01 mg/m³ (TRA Workers 3.0) | < 0.01 |
| Sissehingamise kaudu, lokaalne, akuutne | 0.04 mg/m³ (TRA Workers 3.0) | < 0.01 |

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.5 mg/m³ (TRA Workers 3.0) | 0.1 |
| Sissehingamise kaudu, lokaalne, akuutne | 2 mg/m³ (TRA Workers 3.0) | 0.2 |

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 1 mg/m³ (TRA Workers 3.0) | 0.2 |
| Sissehingamise kaudu, lokaalne, akuutne | 4 mg/m³ (TRA Workers 3.0) | 0.4 |

**2.3.4. Töötaja kokkupuude: *Chemical production where opportunity for exposure arises* (PROC 4)**

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.35 mg/m³ (TRA Workers 3.0) | 0.07 |
| Sissehingamise kaudu, lokaalne, akuutne | 1.4 mg/m³ (TRA Workers 3.0) | 0.14 |

**2.3.5. Töötaja kokkupuude: Mixing or blending in batch processes (PROC 5)**

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.35 mg/m³ (TRA Workers 3.0) | 0.07 |
| Sissehingamise kaudu, lokaalne, akuutne | 1.4 mg/m³ (TRA Workers 3.0) | 0.14 |

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.7 mg/m³ (TRA Workers 3.0) | 0.14 |
| Sissehingamise kaudu, lokaalne, akuutne | 2.8 mg/m³ (TRA Workers 3.0) | 0.28 |

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.1 mg/m³ (TRA Workers 3.0) | 0.02 |
| Sissehingamise kaudu, lokaalne, akuutne | 2 mg/m³ (TRA Workers 3.0) | 0.2 |

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.35 mg/m³ (TRA Workers 3.0) | 0.07 |
| Sissehingamise kaudu, lokaalne, akuutne | 1.4 mg/m³ (TRA Workers 3.0) | 0.14 |

**2.3.9. Töötaja kokkupuude: Use as laboratory reagent (PROC 15, PROC 26)**

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.5 mg/m³ (TRA Workers 3.0) | 0.1 |
| Sissehingamise kaudu, lokaalne, akuutne | 2 mg/m³ (TRA Workers 3.0) | 0.2 |

**2.3.10. Töötaja kokkupuude: Tabletting, compression, extrusion, pelettisation, granulation (PROC 14)**

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 1 mg/m³ (TRA Workers 3.0) | 0.2 |
| Sissehingamise kaudu, lokaalne, akuutne | 4 mg/m³ (TRA Workers 3.0) | 0.4 |

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.35 mg/m³ (TRA Workers 3.0) | 0.07 |
| Sissehingamise kaudu, lokaalne, akuutne | 1.4 mg/m³ (TRA Workers 3.0) | 0.14 |

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.7 mg/m³ (TRA Workers 3.0) | 0.14 |
| Sissehingamise kaudu, lokaalne, akuutne | 2.8 mg/m³ (TRA Workers 3.0) | 0.28 |

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.5 mg/m³ (TRA Workers 3.0) | 0.1 |
| Sissehingamise kaudu, lokaalne, akuutne | 2 mg/m³ (TRA Workers 3.0) | 0.2 |

**2.3.14. Töötaja kokkupuude: Manual maintenance (cleaning and repair) of machinery (PROC 28)**

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.5 mg/m³ (PROC 8a estimate used to cover PROC 28) | 0.1 |
| Sissehingamise kaudu, lokaalne, akuutne | 2 mg/m³ (PROC 8a estimate used to cover PROC 28) | 0.2 |

**2.4. Allkasutaja juhend, mille alusel hinnata, kas ta töötab kokkupuutestsenaariumi sätestatud piirides**

**Peatükk 3. ES 3: Tööstusettevõttes kasutamine; Mitmesugused valdkonnad (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. Pealkirja jaotis**

Kokkupuute-stsenaariumi nimetusIga: *Use at industrial site (e.g. Industrial Indoor use as Chemical Intermediate and Process aid, Industrial Outdoor use)*

Kasutusvaldkond: Põllumajandus, metsandus, kalandus (SU 1), Kaevandamine (v.a avameretööstus) (SU 2a), Avameretööstus (SU 2b), Toidukaupade tootmine (SU 4), Tekstiili, naha ja karusnaha tootmine (SU 5), Tselluloosi, paberi ja pabertoodete tootmine (SU 6b), Kemikaalide (sh naftatoodete) mahtlastina suuremahuline tootmine (SU 8), Peenkemikaalide tootmine (SU 9), Kummitoodete tootmine (SU 11), Plasttoodete tootmine, sh kompaundimine ja muundamine (SU 12), Muude mittemetalliliste mineraaltoodete, nt kipskrohvi, tsemendi tootmine (SU 13), Põhimetallide, sh sulamite tootmine (SU 14), Töödeldud metalltoodete tootmine, v.a masinate ja seadmete tootmine (SU 15), Arvutite, elektroonika- ja optikaseadmete, elektriseadmete tootmine (SU 16), Üldine tootmine, nt masinate, seadmete, sõidukite ja muude transpordivahendite tootmine (SU 17)

|  |  |
| --- | --- |
| **Keskkond** |  |
| 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 |
| **Töötaja** |  |
| 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. Kokkupuudet mõjutavad kasutustingimused**

**3.2.1. Töötaja kokkupuute ohjamine**

**Kõigis kaasstsenaariumides kohaldatavad kasutustingimused**

|  |
| --- |
| **Tehnilised ja organisatsioonilised tingimused ja meetmed** |
| Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision. |
| **Isikukaitse, hügieeni ja tervisekontrolli tingimused ja meetmed** |
| 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.* |
| **Muud töötajate kokkupuudet mõjutavad tingimused** |
| Assumes process temperature up to 20 °C |

​

**Kaasstsenaariumis kohaldatavad erilised kasutustingimused**

|  |  |
| --- | --- |
| **Asjaomane stsenaarium** | **Nõuab erimeetmeid** |
| ***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. Kokkupuutehindamine ja viide selle allikale**

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.01 mg/m³ (TRA Workers 3.0) | < 0.01 |
| Sissehingamise kaudu, lokaalne, akuutne | 0.04 mg/m³ (TRA Workers 3.0) | < 0.01 |

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.5 mg/m³ (TRA Workers 3.0) | 0.1 |
| Sissehingamise kaudu, lokaalne, akuutne | 2 mg/m³ (TRA Workers 3.0) | 0.2 |

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 1 mg/m³ (TRA Workers 3.0) | 0.2 |
| Sissehingamise kaudu, lokaalne, akuutne | 4 mg/m³ (TRA Workers 3.0) | 0.4 |

**3.3.4. Töötaja kokkupuude: Chemical production where opportunity for exposure arises (PROC 4)**

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.35 mg/m³ (TRA Workers 3.0) | 0.07 |
| Sissehingamise kaudu, lokaalne, akuutne | 1.4 mg/m³ (TRA Workers 3.0) | 0.14 |

**3.3.5. Töötaja kokkupuude: Mixing or blending in batch processes (PROC 5)**

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.35 mg/m³ (TRA Workers 3.0) | 0.07 |
| Sissehingamise kaudu, lokaalne, akuutne | 1.4 mg/m³ (TRA Workers 3.0) | 0.14 |

**3.3.6. Töötaja kokkupuude: Calendering operations (PROC 6)**

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.35 mg/m³ (TRA Workers 3.0) | 0.07 |
| Sissehingamise kaudu, lokaalne, akuutne | 1.4 mg/m³ (TRA Workers 3.0) | 0.14 |

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 1.2 mg/m³ (ART) | 0.24 |
| Sissehingamise kaudu, lokaalne, akuutne | 9.6 mg/m³ (ART) | 0.96 |

**3.3.8. Töötaja kokkupuude: Outdoor use; Industrial spraying (PROC 7)**

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 1.2 mg/m³ (ART) | 0.24 |
| Sissehingamise kaudu, lokaalne, akuutne | 9.6 mg/m³ (ART) | 0.96 |

**3.3.9. Töötaja kokkupuude: Outdoor use; Industrial spraying (PROC 7)**

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 1.2 mg/m³ (ART) | 0.24 |
| Sissehingamise kaudu, lokaalne, akuutne | 9.6 mg/m³ (ART) | 0.96 |

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.1 mg/m³ (TRA Workers 3.0) | 0.02 |
| Sissehingamise kaudu, lokaalne, akuutne | 2 mg/m³ (TRA Workers 3.0) | 0.2 |

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.1 mg/m³ (TRA Workers 3.0) | 0.02 |
| Sissehingamise kaudu, lokaalne, akuutne | 2 mg/m³ (TRA Workers 3.0) | 0.2 |

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.05 mg/m³ (TRA Workers 3.0) | 0.01 |
| Sissehingamise kaudu, lokaalne, akuutne | 0.2 mg/m³ (TRA Workers 3.0) | 0.02 |

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 1 mg/m³ (TRA Workers 3.0) | 0.2 |
| Sissehingamise kaudu, lokaalne, akuutne | 4 mg/m³ (TRA Workers 3.0) | 0.4 |

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.35 mg/m³ (TRA Workers 3.0) | 0.07 |
| Sissehingamise kaudu, lokaalne, akuutne | 1.4 mg/m³ (TRA Workers 3.0) | 0.14 |

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.35 mg/m³ (TRA Workers 3.0) | 0.07 |
| Sissehingamise kaudu, lokaalne, akuutne | 1.4 mg/m³ (TRA Workers 3.0) | 0.14 |

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.035 mg/m³ (TRA Workers 3.0) | < 0.01 |
| Sissehingamise kaudu, lokaalne, akuutne | 0.14 mg/m³ (TRA Workers 3.0) | 0.014 |

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.7 mg/m³ (TRA Workers 3.0) | 0.14 |
| Sissehingamise kaudu, lokaalne, akuutne | 2.8 mg/m³ (TRA Workers 3.0) | 0.28 |

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.5 mg/m³ (TRA Workers 3.0) | 0.1 |
| Sissehingamise kaudu, lokaalne, akuutne | 2 mg/m³ (TRA Workers 3.0) | 0.2 |

**3.3.19. Töötaja kokkupuude: *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)**

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.35 mg/m³ (TRA Workers 3.0) | 0.07 |
| Sissehingamise kaudu, lokaalne, akuutne | 1.4 mg/m³ (TRA Workers 3.0) | 0.14 |

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.5 mg/m³ (TRA Workers 3.0) | 0.1 |
| Sissehingamise kaudu, lokaalne, akuutne | 2 mg/m³ (TRA Workers 3.0) | 0.2 |

**3.3.21. Töötaja kokkupuude: Roller application or brushing (PROC 10)**

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.35 mg/m³ (TRA Workers 3.0) | 0.07 |
| Sissehingamise kaudu, lokaalne, akuutne | 1.4 mg/m³ (TRA Workers 3.0) | 0.14 |

**3.3.22. Töötaja kokkupuude: Treatment of articles by dipping and pouring (PROC 13)**

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 1 mg/m³ (TRA Workers 3.0) | 0.2 |
| Sissehingamise kaudu, lokaalne, akuutne | 4 mg/m³ (TRA Workers 3.0) | 0.4 |

**3.3.23. Töötaja kokkupuude: Tabletting, compression, extrusion, pelettisation, granulation (PROC 14)**

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 1 mg/m³ (TRA Workers 3.0) | 0.2 |
| Sissehingamise kaudu, lokaalne, akuutne | 4 mg/m³ (TRA Workers 3.0) | 0.4 |

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.5 mg/m³ (TRA Workers 3.0) | 0.1 |
| Sissehingamise kaudu, lokaalne, akuutne | 2 mg/m³ (TRA Workers 3.0) | 0.2 |

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.1 mg/m³ (TRA Workers 3.0) | 0.02 |
| Sissehingamise kaudu, lokaalne, akuutne | 0.4 mg/m³ (TRA Workers 3.0) | 0.04 |

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.1 mg/m³ (TRA Workers 3.0) | 0.02 |
| Sissehingamise kaudu, lokaalne, akuutne | 0.4 mg/m³ (TRA Workers 3.0) | 0.04 |

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 1 mg/m³ (TRA Workers 3.0) | 0.2 |
| Sissehingamise kaudu, lokaalne, akuutne | 4 mg/m³ (TRA Workers 3.0) | 0.4 |

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.03 mg/m³ (TRA Workers 3.0) | < 0.01 |
| Sissehingamise kaudu, lokaalne, akuutne | 0.12 mg/m³ (TRA Workers 3.0) | 0.012 |

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.5 mg/m³ (ECETOC TRA Workers) | 0.1 |
| Sissehingamise kaudu, lokaalne, akuutne | 2 mg/m³ (ECETOC TRA Workers) | 0.2 |

**3.4. Allkasutaja juhend, mille alusel hinnata, kas ta töötab kokkupuutestsenaariumi sätestatud piirides**

Skaleerimisvahend: 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.

**Peatükk 4. ES 4: Laialdane kasutus kutsetöös; Mitmesugused valdkonnad (SU 0, SU 1, SU 13, SU 19, SU 20)**

**4.1. Pealkirja jaotis**

Kokkupuute-stsenaariumi nimetusIga: Professional use; Indoor use

Kasutusvaldkond: Muud (SU 0), Põllumajandus, metsandus, kalandus (SU 1), Muude mittemetalliliste mineraaltoodete, nt kipskrohvi, tsemendi tootmine (SU 13), Ehitus- ja konstruktsioonitööd (SU 19), Tervishoiuteenused (SU 20)

|  |  |
| --- | --- |
| **Keskkond** |  |
| 1: Indoor use; Professional use | ERC 8a |
| **Töötaja** |  |
| 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. Kokkupuudet mõjutavad kasutustingimused**

**4.2.1. Töötaja kokkupuute ohjamine**

**Kõigis kaasstsenaariumides kohaldatavad kasutustingimused**

|  |
| --- |
| **Isikukaitse, hügieeni ja tervisekontrolli tingimused ja meetmed** |
| *Use suitable eye protection.* |
| **Muud töötajate kokkupuudet mõjutavad tingimused** |
| Indoor use |
| Assumes process temperature up to 20 °C |

​

**Kaasstsenaariumis kohaldatavad erilised kasutustingimused**

|  |  |
| --- | --- |
| **Asjaomane stsenaarium** | **Nõuab erimeetmeid** |
| ***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. Kokkupuutehindamine ja viide selle allikale**

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.01 mg/m³ (TRA Workers 3.0) | < 0.01 |
| Sissehingamise kaudu, lokaalne, akuutne | 0.04 mg/m³ (TRA Workers 3.0) | < 0.01 |

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 1 mg/m³ (TRA Workers 3.0) | 0.2 |
| Sissehingamise kaudu, lokaalne, akuutne | 4 mg/m³ (TRA Workers 3.0) | 0.4 |

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.7 mg/m³ (TRA Workers 3.0) | 0.14 |
| Sissehingamise kaudu, lokaalne, akuutne | 2.8 mg/m³ (TRA Workers 3.0) | 0.28 |

**4.3.4. Töötaja kokkupuude: Chemical production where opportunity for exposure arises (PROC 4)**

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.7 mg/m³ (TRA Workers 3.0) | 0.14 |
| Sissehingamise kaudu, lokaalne, akuutne | 2.8 mg/m³ (TRA Workers 3.0) | 0.28 |

**4.3.5. Töötaja kokkupuude: Mixing or blending in batch processes (PROC 5)**

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.7 mg/m³ (TRA Workers 3.0) | 0.14 |
| Sissehingamise kaudu, lokaalne, akuutne | 2.8 mg/m³ (TRA Workers 3.0) | 0.28 |

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 1.4 mg/m³ (TRA Workers 3.0) | 0.28 |
| Sissehingamise kaudu, lokaalne, akuutne | 5.6 mg/m³ (TRA Workers 3.0) | 0.56 |

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.7 mg/m³ (TRA Workers 3.0) | 0.14 |
| Sissehingamise kaudu, lokaalne, akuutne | 2.8 mg/m³ (TRA Workers 3.0) | 0.28 |

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.7 mg/m³ (TRA Workers 3.0) | 0.14 |
| Sissehingamise kaudu, lokaalne, akuutne | 2.8 mg/m³ (TRA Workers 3.0) | 0.28 |

**4.3.9. Töötaja kokkupuude: Roller application or brushing (PROC 10)**

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.35 mg/m³ (TRA Workers 3.0) | 0.07 |
| Sissehingamise kaudu, lokaalne, akuutne | 1.4 mg/m³ (TRA Workers 3.0) | 0.14 |

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 1.2 mg/m³ (ART) | 0.24 |
| Sissehingamise kaudu, lokaalne, akuutne | 9.6 mg/m³ (ART) | 0.96 |

**4.3.11. Töötaja kokkupuude: Use as laboratory reagent (PROC 15, PROC 26)**

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.35 mg/m³ (TRA Workers 3.0) | 0.07 |
| Sissehingamise kaudu, lokaalne, akuutne | 1.4 mg/m³ (TRA Workers 3.0) | 0.14 |

**4.3.12. Töötaja kokkupuude: Manual activities involving hand contact (PROC 19)**

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.7 mg/m³ (TRA Workers 3.0) | 0.14 |
| Sissehingamise kaudu, lokaalne, akuutne | 2.8 mg/m³ (TRA Workers 3.0) | 0.28 |

**4.3.13. Töötaja kokkupuude: Use of functional fluids in small devices (PROC 20)**

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 1 mg/m³ (TRA Workers 3.0) | 0.2 |
| Sissehingamise kaudu, lokaalne, akuutne | 4 mg/m³ (TRA Workers 3.0) | 0.4 |

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.7 mg/m³ (TRA Workers 3.0) | 0.14 |
| Sissehingamise kaudu, lokaalne, akuutne | 2.8 mg/m³ (TRA Workers 3.0) | 0.28 |

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.7 mg/m³ (ECETOC TRA Workers) | 0.14 |
| Sissehingamise kaudu, lokaalne, akuutne | 2.8 mg/m³ (ECETOC TRA Workers) | 0.28 |

**4.4. Allkasutaja juhend, mille alusel hinnata, kas ta töötab kokkupuutestsenaariumi sätestatud piirides**

Skaleerimisvahend: 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.

**Peatükk 5. ES 5: Laialdane kasutus kutsetöös; Mitmesugused valdkonnad (SU 0, SU 1, SU 5, SU 13, SU 19, SU 20)**

**5.1. Pealkirja jaotis**

Kokkupuute-stsenaariumi nimetusIga: Professional use; Outdoor use

Kasutusvaldkond: Muud (SU 0), Põllumajandus, metsandus, kalandus (SU 1), Tekstiili, naha ja karusnaha tootmine (SU 5), Muude mittemetalliliste mineraaltoodete, nt kipskrohvi, tsemendi tootmine (SU 13), Ehitus- ja konstruktsioonitööd (SU 19), Tervishoiuteenused (SU 20)

|  |  |
| --- | --- |
| **Keskkond** |  |
| 1: Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) | ERC 8d |
| **Töötaja** |  |
| 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. Kokkupuudet mõjutavad kasutustingimused**

**5.2.1. Töötaja kokkupuute ohjamine**

**Kõigis kaasstsenaariumides kohaldatavad kasutustingimused**

|  |
| --- |
| **Muud töötajate kokkupuudet mõjutavad tingimused** |
| Outdoor use |
| Assumes process temperature up to 20 °C |

​

**Kaasstsenaariumis kohaldatavad erilised kasutustingimused**

|  |  |
| --- | --- |
| **Asjaomane stsenaarium** | **Nõuab erimeetmeid** |
| ***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. Kokkupuutehindamine ja viide selle allikale**

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 7E-3 mg/m³ (TRA Workers 3.0) | < 0.01 |
| Sissehingamise kaudu, lokaalne, akuutne | 0.028 mg/m³ (TRA Workers 3.0) | < 0.01 |

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.7 mg/m³ (TRA Workers 3.0) | 0.14 |
| Sissehingamise kaudu, lokaalne, akuutne | 2.8 mg/m³ (TRA Workers 3.0) | 0.28 |

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.7 mg/m³ (TRA Workers 3.0) | 0.14 |
| Sissehingamise kaudu, lokaalne, akuutne | 2.8 mg/m³ (TRA Workers 3.0) | 0.28 |

**5.3.4. Töötaja kokkupuude: Chemical production where opportunity for exposure arises (PROC 4)**

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.35 mg/m³ (TRA Workers 3.0) | 0.07 |
| Sissehingamise kaudu, lokaalne, akuutne | 1.4 mg/m³ (TRA Workers 3.0) | 0.14 |

**5.3.5. Töötaja kokkupuude: Mixing or blending in batch processes (PROC 5)**

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.35 mg/m³ (TRA Workers 3.0) | 0.07 |
| Sissehingamise kaudu, lokaalne, akuutne | 1.4 mg/m³ (TRA Workers 3.0) | 0.14 |

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.7 mg/m³ (TRA Workers 3.0) | 0.14 |
| Sissehingamise kaudu, lokaalne, akuutne | 2.8 mg/m³ (TRA Workers 3.0) | 0.28 |

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.35 mg/m³ (TRA Workers 3.0) | 0.07 |
| Sissehingamise kaudu, lokaalne, akuutne | 1.4 mg/m³ (TRA Workers 3.0) | 0.14 |

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.35 mg/m³ (TRA Workers 3.0) | 0.07 |
| Sissehingamise kaudu, lokaalne, akuutne | 1.4 mg/m³ (TRA Workers 3.0) | 0.14 |

**5.3.9. Töötaja kokkupuude: Roller application or brushing (PROC 10)**

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.35 mg/m³ (TRA Workers 3.0) | 0.07 |
| Sissehingamise kaudu, lokaalne, akuutne | 1.4 mg/m³ (TRA Workers 3.0) | 0.14 |

**5.3.10. Töötaja kokkupuude: Outdoor use; Non-industrial spraying (PROC 11)**

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 1.2 mg/m³ (ART) | 0.24 |
| Sissehingamise kaudu, lokaalne, akuutne | 9.6 mg/m³ (ART) | 0.96 |

**5.3.11. Töötaja kokkupuude: Outdoor use; Non-industrial spraying (PROC 11)**

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 1.2 mg/m³ (ART) | 0.24 |
| Sissehingamise kaudu, lokaalne, akuutne | 9.6 mg/m³ (ART) | 0.96 |

**5.3.12. Töötaja kokkupuude: Use as laboratory reagent (PROC 15, PROC 26)**

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.35 mg/m³ (TRA Workers 3.0) | 0.07 |
| Sissehingamise kaudu, lokaalne, akuutne | 1.4 mg/m³ (TRA Workers 3.0) | 0.14 |

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.35 mg/m³ (TRA Workers 3.0) | 0.07 |
| Sissehingamise kaudu, lokaalne, akuutne | 1.4 mg/m³ (TRA Workers 3.0) | 0.14 |

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.7 mg/m³ (TRA Workers 3.0) | 0.14 |
| Sissehingamise kaudu, lokaalne, akuutne | 2.8 mg/m³ (TRA Workers 3.0) | 0.28 |

**5.3.15. Töötaja kokkupuude: Use of functional fluids in small devices (PROC 20)**

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.7 mg/m³ (TRA Workers 3.0) | 0.14 |
| Sissehingamise kaudu, lokaalne, akuutne | 2.8 mg/m³ (TRA Workers 3.0) | 0.28 |

**5.4. Allkasutaja juhend, mille alusel hinnata, kas ta töötab kokkupuutestsenaariumi sätestatud piirides**

Juhendid: 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.

**Peatükk 6. ES 6: Tarbijakasutus; Mitmesugused tooted (PC 0, PC 2, PC 4, PC 12, PC 16, PC 27, PC 35, PC 37)**

**6.1. Pealkirja jaotis**

Kokkupuute-stsenaariumi nimetusIga: Consumer use; Indoor or outdoor use

Kemikaalikategooria: Muud (PC 0), Adsorbendid (PC 2), Antifriisid ja jäätõrjetooted (PC 4), Väetised (PC 12), Soojusülekande vedelikud (PC 16), Taimekaitsevahendid (PC 27), Pesu- ja puhastustooted (PC 35), Veepuhastuskemikaalid (PC 37)

|  |  |
| --- | --- |
| **Keskkond** |  |
| 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 |
| **Tarbija** |  |
| 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. Kokkupuudet mõjutavad kasutustingimused**

**6.2.1. Tarbija kokkupuute ohjamine: Dust suppressant; No spraying (PC 0)**

|  |
| --- |
| **Toote omadused** |
| Covers concentrations up to 100 % |
| *Solid, medium dustiness. Covers also liquid form* |
| **Kasutatud kogus, kasutamise/kokkupuute sagedus ja kestus** |
| Covers use up to 1 events per day |
| *Covers use up to 24 h* |
| **Teave ja käitumisnõuanded tarbijatele** |
| *Requires room with good ventilation* |
| *Use suitable eye protection. Avoid direct eye contact with product, also via contamination on hands.* |
| **Muud tarbijate kokkupuudet mõjutavad tingimused** |
| Release area <= 125 m2 |

**6.2.2. Tarbija kokkupuute ohjamine: Dust suppressant; Spraying (PC 0)**

|  |
| --- |
| **Toote omadused** |
| 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* |
| **Kasutatud kogus, kasutamise/kokkupuute sagedus ja kestus** |
| Covers use up to 1 events per day |
| *Covers 10 minutes spraying application* |
| **Teave ja käitumisnõuanded tarbijatele** |
| *Requires room with good ventilation* |
| *Use suitable eye protection. Avoid direct eye contact with product, also via contamination on hands.* |

**6.2.3. Tarbija kokkupuute ohjamine: *Humidity adsorbants* (PC 0)**

|  |
| --- |
| **Toote omadused** |
| Covers concentrations up to 100 % |
| *Solid, medium dustiness. Covers also liquid form* |
| **Kasutatud kogus, kasutamise/kokkupuute sagedus ja kestus** |
| Covers use up to 1 events per day |
| *Covers use up to 24 h* |
| **Teave ja käitumisnõuanded tarbijatele** |
| *Requires room with good ventilation* |
| *Use suitable eye protection. Avoid direct eye contact with product, also via contamination on hands.* |
| **Muud tarbijate kokkupuudet mõjutavad tingimused** |
| Release area <= 125 m2 |

**6.2.4. Tarbija kokkupuute ohjamine: *Cement/concrete/mortar* (PC 0)**

|  |
| --- |
| **Toote omadused** |
| Covers concentrations up to 100 % |
| *Solid, medium dustiness. Covers also liquid form* |
| **Kasutatud kogus, kasutamise/kokkupuute sagedus ja kestus** |
| Covers use up to 1 events per day |
| *Covers use up to 24 h* |
| **Teave ja käitumisnõuanded tarbijatele** |
| *Requires room with good ventilation* |
| *Use suitable eye protection. Avoid direct eye contact with product, also via contamination on hands.* |
| **Muud tarbijate kokkupuudet mõjutavad tingimused** |
| Release area <= 125 m2 |

**6.2.5. Tarbija kokkupuute ohjamine: Adsorbents (PC 2)**

|  |
| --- |
| **Toote omadused** |
| Covers concentrations up to 100 % |
| *Solid, medium dustiness. Covers also liquid form* |
| **Kasutatud kogus, kasutamise/kokkupuute sagedus ja kestus** |
| Covers use up to 1 events per day |
| *Covers use up to 24 h* |
| **Teave ja käitumisnõuanded tarbijatele** |
| *Requires room with good ventilation* |
| *Use suitable eye protection. Avoid direct eye contact with product, also via contamination on hands.* |
| **Muud tarbijate kokkupuudet mõjutavad tingimused** |
| Release area <= 125 m2 |

**6.2.6. Tarbija kokkupuute ohjamine: Anti-freeze and de-icing products; No spraying (PC 4)**

|  |
| --- |
| **Toote omadused** |
| Covers concentrations up to 100 % |
| *Solid, medium dustiness. Covers also liquid form* |
| **Kasutatud kogus, kasutamise/kokkupuute sagedus ja kestus** |
| 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* |
| **Teave ja käitumisnõuanded tarbijatele** |
| *Requires room with good ventilation* |
| *Use suitable eye protection. Avoid direct eye contact with product, also via contamination on hands.* |
| **Muud tarbijate kokkupuudet mõjutavad tingimused** |
| Release area <= 125 m2 |

**6.2.7. Tarbija kokkupuute ohjamine: Anti-freeze and de-icing products; Spraying (PC 4)**

|  |
| --- |
| **Toote omadused** |
| 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* |
| **Kasutatud kogus, kasutamise/kokkupuute sagedus ja kestus** |
| Covers use up to 1 events per day |
| *Covers 10 minutes spraying application* |
| **Teave ja käitumisnõuanded tarbijatele** |
| *Requires room with good ventilation* |
| *Use suitable eye protection. Avoid direct eye contact with product, also via contamination on hands.* |

**6.2.8. Tarbija kokkupuute ohjamine: Fertilizers; No spraying (PC 12)**

|  |
| --- |
| **Toote omadused** |
| Covers concentrations up to 100 % |
| *Solid, medium dustiness. Covers also liquid form* |
| **Kasutatud kogus, kasutamise/kokkupuute sagedus ja kestus** |
| Covers use up to 1 events per day |
| *Covers use up to 24 h* |
| **Teave ja käitumisnõuanded tarbijatele** |
| *Requires room with good ventilation* |
| *Use suitable eye protection. Avoid direct eye contact with product, also via contamination on hands.* |
| **Muud tarbijate kokkupuudet mõjutavad tingimused** |
| Release area <= 125 m2 |

**6.2.9. Tarbija kokkupuute ohjamine: Fertilizers; Spraying (PC 12)**

|  |
| --- |
| **Toote omadused** |
| 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* |
| **Kasutatud kogus, kasutamise/kokkupuute sagedus ja kestus** |
| Covers use up to 1 events per day |
| *Covers 10 minutes spraying application* |
| **Teave ja käitumisnõuanded tarbijatele** |
| *Requires room with good ventilation* |
| *Use suitable eye protection. Avoid direct eye contact with product, also via contamination on hands.* |

**6.2.10. Tarbija kokkupuute ohjamine: Heat transfer fluids (PC 16)**

|  |
| --- |
| **Toote omadused** |
| Covers concentrations up to 100 % |
| *Solid, medium dustiness. Covers also liquid form* |
| **Kasutatud kogus, kasutamise/kokkupuute sagedus ja kestus** |
| Covers use up to 1 events per day |
| *Covers use up to 24 h* |
| **Teave ja käitumisnõuanded tarbijatele** |
| *Requires room with good ventilation* |
| *Use suitable eye protection. Avoid direct eye contact with product, also via contamination on hands.* |
| **Muud tarbijate kokkupuudet mõjutavad tingimused** |
| Release area <= 125 m2 |

**6.2.11. Tarbija kokkupuute ohjamine: Plant protection products; No spraying (PC 27)**

|  |
| --- |
| **Toote omadused** |
| Covers concentrations up to 100 % |
| *Solid, medium dustiness. Covers also liquid form* |
| **Kasutatud kogus, kasutamise/kokkupuute sagedus ja kestus** |
| Covers use up to 1 events per day |
| *Covers use up to 24 h* |
| **Teave ja käitumisnõuanded tarbijatele** |
| *Requires room with good ventilation* |
| *Use suitable eye protection. Avoid direct eye contact with product, also via contamination on hands.* |
| **Muud tarbijate kokkupuudet mõjutavad tingimused** |
| Release area <= 125 m2 |

**6.2.12. Tarbija kokkupuute ohjamine: Plant protection products; Spraying (PC 27)**

|  |
| --- |
| **Toote omadused** |
| 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* |
| **Kasutatud kogus, kasutamise/kokkupuute sagedus ja kestus** |
| Covers use up to 1 events per day |
| *Covers 10 minutes spraying application* |
| **Teave ja käitumisnõuanded tarbijatele** |
| *Requires room with good ventilation* |
| *Use suitable eye protection. Avoid direct eye contact with product, also via contamination on hands.* |

**6.2.13. Tarbija kokkupuute ohjamine: Water treatment chemicals (PC 37)**

|  |
| --- |
| **Toote omadused** |
| Covers concentrations up to 100 % |
| *Solid, medium dustiness. Covers also liquid form* |
| *Covers exposure via inhalation route* |
| **Kasutatud kogus, kasutamise/kokkupuute sagedus ja kestus** |
| Covers use up to 1 events per day |
| *Covers use up to 24 h* |
| **Teave ja käitumisnõuanded tarbijatele** |
| *Requires room with good ventilation* |
| *Use suitable eye protection. Avoid direct eye contact with product, also via contamination on hands.* |
| **Muud tarbijate kokkupuudet mõjutavad tingimused** |
| Release area <= 125 m2 |

**6.2.14. Tarbija kokkupuute ohjamine: Washing and cleaning products; No spraying (PC 35)**

|  |
| --- |
| **Toote omadused** |
| Covers concentrations up to 100 % |
| *Solid, medium dustiness. Covers also liquid form* |
| **Kasutatud kogus, kasutamise/kokkupuute sagedus ja kestus** |
| Covers use up to 1 events per day |
| *Covers use up to 24 h* |
| **Teave ja käitumisnõuanded tarbijatele** |
| *Requires room with good ventilation* |
| *Use suitable eye protection. Avoid direct eye contact with product, also via contamination on hands.* |
| **Muud tarbijate kokkupuudet mõjutavad tingimused** |
| Release area <= 125 m2 |

**6.2.15. Tarbija kokkupuute ohjamine: Washing and cleaning products; Spraying (PC 35)**

|  |
| --- |
| **Toote omadused** |
| 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* |
| **Kasutatud kogus, kasutamise/kokkupuute sagedus ja kestus** |
| Covers use up to 1 events per day |
| *Covers 10 minutes spraying application* |
| **Teave ja käitumisnõuanded tarbijatele** |
| *Requires room with good ventilation* |
| *Use suitable eye protection. Avoid direct eye contact with product, also via contamination on hands.* |

**6.3. Kokkupuutehindamine ja viide selle allikale**

**6.3.1. Tarbija kokkupuude: Dust suppressant; No spraying (PC 0)**

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 5E-3 mg/m³ (ConsExpo) | < 0.01 |
| Sissehingamise kaudu, lokaalne akuutne | 0.01 mg/m³ (ConsExpo) | < 0.01 |

**6.3.2. Tarbija kokkupuude: Dust suppressant; Spraying (PC 0)**

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.687 mg/m³ (ConsExpo) | 0.275 |
| Sissehingamise kaudu, lokaalne akuutne | 0.69 mg/m³ (ConsExpo) | 0.138 |

**6.3.3. Tarbija kokkupuude: *Humidity adsorbants* (PC 0)**

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 5E-3 mg/m³ (ConsExpo) | < 0.01 |
| Sissehingamise kaudu, lokaalne akuutne | 0.01 mg/m³ (ConsExpo) | < 0.01 |

**6.3.4. Tarbija kokkupuude: *Cement/concrete/mortar* (PC 0)**

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 5E-3 mg/m³ (ConsExpo) | < 0.01 |
| Sissehingamise kaudu, lokaalne akuutne | 0.01 mg/m³ (ConsExpo) | < 0.01 |

**6.3.5. Tarbija kokkupuude: Adsorbents (PC 2)**

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 5E-3 mg/m³ (ConsExpo) | < 0.01 |
| Sissehingamise kaudu, lokaalne akuutne | 0.01 mg/m³ (ConsExpo) | < 0.01 |

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 5E-3 mg/m³ (ConsExpo) | < 0.01 |
| Sissehingamise kaudu, lokaalne akuutne | 0.01 mg/m³ (ConsExpo) | < 0.01 |

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

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.687 mg/m³ (ConsExpo) | 0.275 |
| Sissehingamise kaudu, lokaalne akuutne | 0.69 mg/m³ (ConsExpo) | 0.138 |

**6.3.8. Tarbija kokkupuude: Fertilizers; No spraying (PC 12)**

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 5E-3 mg/m³ (ConsExpo) | < 0.01 |
| Sissehingamise kaudu, lokaalne akuutne | 0.01 mg/m³ (ConsExpo) | < 0.01 |

**6.3.9. Tarbija kokkupuude: Fertilizers; Spraying (PC 12)**

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.687 mg/m³ (ConsExpo) | 0.275 |
| Sissehingamise kaudu, lokaalne akuutne | 0.69 mg/m³ (ConsExpo) | 0.138 |

**6.3.10. Tarbija kokkupuude: Heat transfer fluids (PC 16)**

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 5E-3 mg/m³ (ConsExpo) | < 0.01 |
| Sissehingamise kaudu, lokaalne akuutne | 0.01 mg/m³ (ConsExpo) | < 0.01 |

**6.3.11. Tarbija kokkupuude: Plant protection products; No spraying (PC 27)**

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 5E-3 mg/m³ (ConsExpo) | < 0.01 |
| Sissehingamise kaudu, lokaalne akuutne | 0.01 mg/m³ (ConsExpo) | < 0.01 |

**6.3.12. Tarbija kokkupuude: Plant protection products; Spraying (PC 27)**

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.687 mg/m³ (ConsExpo) | 0.275 |
| Sissehingamise kaudu, lokaalne akuutne | 0.69 mg/m³ (ConsExpo) | 0.138 |

**6.3.13. Tarbija kokkupuude: Water treatment chemicals (PC 37)**

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 5E-3 mg/m³ (ConsExpo) | < 0.01 |
| Sissehingamise kaudu, lokaalne akuutne | 0.01 mg/m³ (ConsExpo) | < 0.01 |

**6.3.14. Tarbija kokkupuude: Washing and cleaning products; No spraying (PC 35)**

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 5E-3 mg/m³ (ConsExpo) | < 0.01 |
| Sissehingamise kaudu, lokaalne akuutne | 0.01 mg/m³ (ConsExpo) | < 0.01 |

**6.3.15. Tarbija kokkupuude: Washing and cleaning products; Spraying (PC 35)**

| **Kokkupuuteviis ja toimete liik** | **Kokkupuutehindamine** | **RCR** |
| --- | --- | --- |
| Sissehingamise kaudu, lokaalne, pikaajaline | 0.687 mg/m³ (ConsExpo) | 0.275 |
| Sissehingamise kaudu, lokaalne akuutne | 0.69 mg/m³ (ConsExpo) | 0.138 |

**6.4. Allkasutaja juhend, mille alusel hinnata, kas ta töötab kokkupuutestsenaariumi sätestatud piirides**