REACH-Exposure Scenario
Downstream use of PM Production

Template
Revision: 5
Issue: April 2009

European Powder Metallurgy Association

<table>
<thead>
<tr>
<th>End application made at your site:</th>
<th>1</th>
<th>Packed Powder Mixing</th>
<th>Raw Material: See list of Substances for MMQ.xls</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>REACH Status: Downstream use of substances</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Process Step</th>
<th>Workplace Exposure Route of exposure to humans</th>
<th>Environmental Exposure Emission to environment</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>N°</th>
<th>Description See Table 2</th>
<th>Inhalation</th>
<th>Oral</th>
<th>Dermal</th>
<th>RMM in use See Table 1</th>
<th>Air</th>
<th>Water</th>
<th>Soil</th>
<th>RMM in use</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Raw material handling</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>LEV, C, RPEum, FPQM, PC, GPuv</td>
<td>yes</td>
<td>none</td>
<td>none</td>
<td>F98% SC</td>
</tr>
<tr>
<td>2</td>
<td>Mixing</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>-</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>-</td>
</tr>
<tr>
<td>3</td>
<td>Weighing and Packing</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>LEV, C, RPEum, FPQM, PC, GPuv</td>
<td>yes</td>
<td>none</td>
<td>none</td>
<td>F98% SC</td>
</tr>
<tr>
<td>4</td>
<td>Cleaning and Maintenance</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>LEV, C, RPEum, FPQM, PC, GPuv</td>
<td>yes</td>
<td>none</td>
<td>none</td>
<td>F98% SC</td>
</tr>
</tbody>
</table>

Operational Condition (OC)

Quality and Quantity of material used: See List of Substance Packed Powder Mixes
Physical form (e.g. particle, gaseous media): Particle
Temperature: Room Temperature
Annual operating days (days/year): 365
Number of working hours per day (hours/day): 24/day
Number of shifts per day: 3
Number of employees involved in the process steps (see above): NA
Frequency and duration (e.g. numbers of workers exposed and the time they are exposed and also how frequently are they exposed): NA

1 Table of Risk Management Measures (RMM) in use

<table>
<thead>
<tr>
<th>Type of Risk Management Measures – Environment</th>
<th>RMM in use (Codes) (Delete whichever does not apply)</th>
<th>Efficiency (if possible, provide a quantitative figure)</th>
</tr>
</thead>
<tbody>
<tr>
<td>To Air:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fabric or bag filters</td>
<td>F</td>
<td>98% : F98%</td>
</tr>
<tr>
<td>Other:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>To control general diffuse site emissions:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Storage coverage</td>
<td>SC</td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type of Risk Management Measures – Workers</td>
<td>RMM in use (Codes) (Delete whichever does not apply)</td>
<td>Efficiency (if possible, provide a quantitative figure)</td>
</tr>
<tr>
<td>Local Exhaust Ventilation (LEV)</td>
<td>LEV</td>
<td></td>
</tr>
<tr>
<td>Cleaning of site</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>• Respiratory protection</td>
<td>Pattern of use mandatory: RPEum</td>
<td>Mandatory : RPEum</td>
</tr>
</tbody>
</table>

Example 1 PM Downstream Use Information Form for Powder Mixing page 1 of 2
equipment (RPE): Pattern of use (mandatory, voluntary, not required?)

| Pattern of use mandatory: RPEuv |
| Pattern of use voluntary: RPEuv |
| Pattern of use not required: RPEunr |

- Face piece (e.g. quarter mask) : FP   Quarter Mask: FPQM
- Protection class (particles) : PC
- Gloves (G): Pattern or use (mandatory, voluntary, not required?):
  - Pattern of use mandatory: GPum
  - Pattern of use voluntary: GPuv
  - Pattern of use not required: GPunr
  - Voluntary: GPuv
- Type of glove (description)
- Other (please specify):

Comments:

none

2 Table of Process Steps Full Descriptions

<table>
<thead>
<tr>
<th>Process Step</th>
<th>Description</th>
<th>Full Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Raw material handling</td>
<td>The raw materials are transported in closed containers to dosing and weighing station. Manually filling of Substance (see list of Substances for MMQ) into a hopper under local exhaust ventilation system. Filling from hopper into the mixer in a closed system.</td>
</tr>
<tr>
<td>2</td>
<td>Mixing</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Weighing and Packing</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Cleaning and Maintenance</td>
<td>Vacuum cleaning in the packing station and of other facilities.</td>
</tr>
</tbody>
</table>

3 Glossary

<table>
<thead>
<tr>
<th>Term</th>
<th>English</th>
<th>French</th>
<th>German</th>
</tr>
</thead>
<tbody>
<tr>
<td>RPE</td>
<td>Respiratory Protective Equipment</td>
<td>Equipement protecteur respiratoire (EPR)</td>
<td>Atemschutzausrüstung</td>
</tr>
<tr>
<td>PPE</td>
<td>Personal Protective Equipment</td>
<td>Equipement protecteur personnel (EPP)</td>
<td>persönliche Schutzausrüstung</td>
</tr>
<tr>
<td>LEV</td>
<td>Local Exhaust Ventilation</td>
<td>Ventilation externe locale (VEL)</td>
<td>Absauganlage</td>
</tr>
<tr>
<td>RMM</td>
<td>Risk Management Method</td>
<td>Méthode de management du risque (MMR)</td>
<td>Risikomanagementmaßnahme</td>
</tr>
<tr>
<td>um</td>
<td>use mandatory</td>
<td>Utilisation obligatoire</td>
<td>Pflichtanwendung</td>
</tr>
<tr>
<td>uv</td>
<td>use voluntary</td>
<td>Utilisation volontaire</td>
<td>Freiwillige Anwendung</td>
</tr>
<tr>
<td>unr</td>
<td>use not required</td>
<td>Utilisation non requise</td>
<td>Anwendung nicht erforderlich</td>
</tr>
<tr>
<td>QM</td>
<td>quarter mask</td>
<td>Nettoyage</td>
<td>Reinigung</td>
</tr>
</tbody>
</table>

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