

# REACH-Exposure Scenario

Downstream use of PM Production



Template  
Revision: 5

Issue: April 2009

European Powder  
Metallurgy Association

End application made at your site:		<b>2</b>	<b>Conventional Powder Metallurgy : Pressing</b>			Raw Material: See list of Substances for MMQ.xls REACH Status: Downstream use of substances			
Process Step		Workplace Exposure Route of exposure to humans				Environmental Exposure Emission to environment			
N°	Description See Table 2	Inhalation	Oral	Dermal	RMM in use See Table 1	Air	Water	Soil	RMM in use See Table 1
1	Raw material handling	yes	none	yes	yes	none**	none**	none**	
2	Pressing								
3	Green handling and green machining	yes	none	yes	yes	none**	none**	none**	
3	Cleaning and Maintenance Pressing	yes	none	yes	yes	none**	none**	none**	

## Operational Condition (OC)

**Quality and Quantity of material used:** See *List of Substance Pressing and Sintering*

**Physical form (e.g. particle, gaseous media):** particle

**Temperature:** Room Temperature

**Annual operating days (days/year):** 260

**Number of working hours per day (hours/day):** 14.4 hrs/day

**Number of shifts per day:** 2

**Number of employees involved in the process steps (see above):** 313. 83 workers for pressing and raw material handling; 15 workers for maintenance

**Frequency and duration (e.g. numbers of workers exposed and the time they are exposed and also how frequently are they exposed):** exposed time and frequency cannot be quantified

### 1 Table of Risk Management Measures (RMM) in use

Type of Risk Management Measures - <u>Environment</u>	RMM in use (Codes) (Delete whichever does not apply)	Efficiency (if possible, provide a quantitative figure)
<b>To Air:</b>		
Fabric or bag filters	F	unr
Other:		
<b>To control general diffuse site emissions:</b>		
Storage coverage	SC	
Other:		Powder: closed big bags
Type of Risk Management Measures - <u>Workers</u> ***	RMM in use (Codes) (Delete whichever does not apply)	Efficiency (if possible, provide a quantitative figure)
Local Exhaust Ventilation (LEV)	LEV	unr
Cleaning of site	C	Efficiency can not be quantified
• Respiratory protection equipment: Pattern of use (mandatory, voluntary, not required?)	Pattern of use mandatory: RPEum Pattern of use voluntary: RPEuv Pattern of use not required: RPEunr	Raw material handling: RPEuv Raw material handling: RPEum (for Aluminium only) Pressing: RPEunr

# REACH-Exposure Scenario

## Downstream use of PM Production



Template  
Revision: 5

Issue: April 2009

European Powder  
Metallurgy Association

• Face piece (e.g. quarter mask)	FP	Raw material handling: FPQMuv Pressing: FPQMum (for Aluminium only)
• Protection class (particles)	PC	Raw material handling: PC*
• Gloves (G): Pattern or use (mandatory, voluntary, not required?)	<del>Pattern of use mandatory: GPum</del> Pattern of use voluntary: GPuv Pattern of use not required: GPunr	Raw material handling: GPuv Pressing: GPunr
• Type of glove (description)		Standard work gloves
• Other (please specify):		

### Comments:

\* Depending on task um,uv or unr. To give a quantitative figure is not possible

\*\* Environmental impact is assessed during normal production; emergencies are not put in consideration. Environmental Exposures are defined as environmental impact to the environment outside the plant.

\*\*\* General: There are several examinations by the company doctor which verifies that there is no negative impact on employees. Frequently examinations like breathing test, urine test, blood test and others are made

### 2 Table of Process Steps Full Descriptions

Process Step		
N°	Description	Full Description
1	Raw material handling	Transfer of Powder Mixes from Pack into the die filling system. Transfer of compacted parts to sintering furnaces.
2	Pressing Green handling and green machining	Load the powder into a die and apply pressure to produce a compact part having sufficient cohesion to enable it to be handled safely and transferred to the next step. The mixed powders are usually pressed to shape in a rigid steel or carbide die under pressures of 150-900 MPa.  Green machining: drilling, milling, turning
3	Cleaning and Maintenance Pressing	Cleaning the pressing station,

### 3 Glossary

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

*Disclaimer: The EPMA (European Powder Metallurgy Association) does not accept any liability for the content, the accuracy of the content or for the use which might be made of the information given in this document.*