

### HH-38.1. Occupational scenario for industrial crushing grinding processes

Systematic title based on use descriptor	PROCs	
	24	High (mechanical) energy work-up of substances bound in materials and/or articles.

### HH-38.2 Controlling worker exposure

Product characteristics	Borate is most often a small component of the mixture, and in some cases an impurity.	
Amounts used	Several tonnes per day.	
Frequency and duration of use	Daily but not always shift-length.	
Human factors not influenced by risk management	None	
Other given operational conditions affecting workers exposure	Activities take place indoors at ambient conditions.	
Technical conditions and measures at process level (source) to prevent release	The grinding mill is enclosed.	
Technical conditions and measures to control dispersion from source towards the worker	LEV present.	
Organisational measures to prevent /limit releases, dispersion and exposure	Appropriate training. Regular testing and maintenance of plant and equipment.	
Conditions and measures related to personal protection, hygiene and health evaluation	<b>Clothing</b>	Standard work clothes
	<b>Gloves</b>	Not required for normal industrial exposure
	<b>Eye protection</b>	Required where good hygiene practice or substance classification demands it
	<b>RPE</b>	P2 required during transfers

### HH-38.3. Exposure estimation

Human Health Exposure Estimations	Grinding takes place in closed mills, so there is no inhalation or dermal exposure during the grinding process. Inhalation and dermal exposure may occur during transfers – these exposures are covered in exposure scenarios for discharging bags.
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### HH-38.4. Guidance to DU to evaluate whether he works inside the boundaries set by the ES

If the parameters used in the MEASE model outlined above do not reflect conditions at the DU facility, the DU can use MEASE and input the parameters that do reflect conditions at the DU facility to check whether the DU works inside the boundaries set by the ES. Detailed guidance for evaluation of ES can be acquired via your supplier or from the ECHA website (guidance R14, R16).