

HH-27.1. Occupational scenario for spreading of boron containing granular fertiliser

Systematic title based on use descriptor	PROCs	
	11	Non-industrial spraying.

HH-27.2 Controlling worker exposure

Product characteristics	Granular and may contain between 0.5 and 20.9% borate/boric acid.	
Amounts used	Depends on the area, could be several tonnes.	
Frequency and duration of use	Once or twice per year, taking one or two days to complete.	
Human factors not influenced by risk management	None	
Other given operational conditions affecting workers exposure	The fertiliser is applied outdoors.	
Technical conditions and measures at process level (source) to prevent release	None	
Technical conditions and measures to control dispersion from source towards the worker	Air conditioned cabs possible.	
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	Clothing	-
	Gloves	Not required for normal industrial exposure
	Eye protection	-
	RPE	-

HH-27.3. Exposure estimation

Human Health Exposure Estimations	INHALATION					
		Activity	Source/ Parameters	RMM	Value 8h TWA mg B/m ³	RCR DNEL = 1.45 mg B/m ³
	Modelled (ART)	Spreading of fertiliser	Fine dry dust Spray application of powders Spraying horizontal or downwards No housekeeping Outdoors Worker distance >4m No localised controls Personal enclosure	Fully enclosed and air-conditioned tractor cab	0.0004 (90P)	<0.001
Modelled (ART)	Spreading of fertiliser	Fine dry dust Spray application of powders Spraying horizontal or downwards No housekeeping Outdoors Worker distance >4m No localised controls Partial enclosure without ventilation	Without air-conditioned tractor cab	0.003 (90P)	0.0021	
	DERMAL					
	Activity	Source/ Parameters	RMM	Value mg B/day	RCR DNEL = 4800 mg B/day	
Minimal opportunity for dermal exposure as the worker is segregated in the tractor cab.						

HH-27.4. 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).