

HH-5.1. Occupational scenario for fertigation using boron-containing liquid fertiliser

Systematic title based on use descriptor	PROCs	
	2	Use in closed, continuous process with occasional controlled exposure.

HH-5.2 Controlling worker exposure

Product characteristics	Liquid, containing between 0.001 and 7% boron.	
Amounts used	Depends on the area, could be several tonnes.	
Frequency and duration of use	Automatic system with IBCs being changed once or twice a week.	
Human factors not influenced by risk management	None	
Other given operational conditions affecting workers exposure	None	
Technical conditions and measures at process level (source) to prevent release	Closed system releasing to the soil.	
Technical conditions and measures to control dispersion from source towards the worker	None	
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-5.3. Exposure estimation

INHALATION								
Not relevant, fertiliser are liquid and fed via closed system to the soil								
DERMAL								
Human Health Exposure Estimations	Modelled (MEASE)	Activity	Source/ Parameters		RMM	Value mg B/day	RCR DNEL = 4800 mg B/day	
			Changeover of IBCs, bulk deliveries, connecting pipework	Physical form				aqueous solution
				Content				5-25% boron
				PROC				8
				Duration				< 15 min
				Use pattern				non-dispersive
				Handling				non-direct
Contact level	incidental							

HH-5.4. 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).