

### HH-17.1. Occupational scenario for make up of treatment bath for galvanising, plating and other surface treatments

Systematic title based on use descriptor	PROCs	
	8b	Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities.

### HH-17.2 Controlling worker exposure

Product characteristics	Powder form.	
Amounts used	Ranging from 25-200 kg borate.	
Frequency and duration of use	Topping up once or twice a week with 25-50 kg of borate. Make up once or twice a year with 200 kg of borate. This activity takes approximately 30 minutes.	
Human factors not influenced by risk management	None	
Other given operational conditions affecting workers exposure	Activities take place indoors.	
Technical conditions and measures at process level (source) to prevent release	None	
Technical conditions and measures to control dispersion from source towards the worker	Canopy hoods over the baths capture and remove steam.	
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>	Chemical resistant overalls.
	<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/P3 required where exposure is above the DNEL

### HH-17.3. Exposure estimation

INHALATION							
	Activity	Source/ Parameters	RMM	Value 8h TWA mg B/m <sup>3</sup>	RCR DNEL = 1.45 mg B/m <sup>3</sup>		
Human Health Exposure Estimations	Measured	Addition of borates in treatment baths	Read Across from discharge 25kg bags into mixing vessels	RPE not taken into account	0.78	0.54	
	DERMAL						
	Modelled (MEASE)	Discharging of fertilisers into hoppers	Physical form	high dustiness	-	0.288	<0.001
			Content	5 - 25% boron			
			PROC	8b			
			Duration	15 – 60 min			
			Use pattern	non dispersive			
			Handling	direct			
	Contact level	intermittent					

### HH-17.4. 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).