

HH-32.1. Occupational scenario for working in a laboratory

Systematic title based on use descriptor	PROCs	
	15	Use as laboratory reagent.

HH-32.2 Controlling worker exposure

Product characteristics	Granular or powder form.	
Amounts used	Samples of about 1kg at borate processing plants. Small amounts used in a wide variety of laboratories.	
Frequency and duration of use	Few minutes per day.	
Human factors not influenced by risk management	None	
Other given operational conditions affecting workers exposure	Very small quantities are used, tests are often carried out in fume cupboards.	
Technical conditions and measures at process level (source) to prevent release	None	
Technical conditions and measures to control dispersion from source towards the worker	Some tests are carried out in fume cupboards.	
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	Standard work clothes.
	Gloves	Not required for normal industrial exposure.
	Eye protection	Required where good hygiene practice or substance classification demands it.
	RPE	-

HH-32.3. 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	
	Measured	Laboratory work	90P of measured data (18 datapoints)	-	0.16	0.11	
Human Health Exposure Estimations	DERMAL						
		Activity	Source/ Parameters	RMM	Value mg B/day	RCR DNEL = 4800 mg B/day	
	Modelled (MEASE)	Laboratory work	Physical form	high dustiness	-	0.014	<0.001
			Content	5 - 25% boron			
			PROC	15			
			Duration	> 240 min			
			Use pattern	non dispersive			
Handling			non direct				
Contact level	incidental						

HH-32.4. 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).