

HH-11.1. Occupational scenario for industrial use of paints and coatings

Systematic title based on use descriptor	PROCs	
	7	Industrial spraying.
	10	Roller application or brushing.

HH-11.2 Controlling worker exposure

Product characteristics	Paints are liquid mixtures and may contain 0.5 – 3.6% boron.	
Amounts used	Tens of kilogrammes boron per day.	
Frequency and duration of use	Daily shift-length activity.	
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	If applied by brush or roller there is no production of aerosol.	
Technical conditions and measures to control dispersion from source towards the worker	LEV may be available to control release of airborne aerosol where spray application is used.	
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	P2/P3 required where exposure is above the DNEL. Full-face, air-fed respirators may be used when spraying.

HH-11.3. 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)	Spraying of paint	Powders dissolved in a viscous liquid Surface-spraying Moderate application, Effective Housekeeping. Indoors Any size workroom 6 hours a day No secondary controls General ventilation	LEV in use, RPE not taken into account	0.67	0.46	
Modelled (MEASE)	DERMAL						
		Activity	Source/ Parameters	RMM	Value mg B/day	RCR DNEL = 4800 mg B/day	
		Spraying of paint	Physical form	liquid	LEV	0.048	<0.001
			Content	1-5% boron			
			PROC	7			
			Duration	> 240 min			
			Use pattern	wide dispersive			
Handling			non direct				
Contact level	intermittent						

HH-11.4. 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).