

HH-12.1. Occupational scenario for use of cleaning solutions in industrial or professional settings

Systematic title based on use descriptor	PROCs	
	7	Industrial spraying.
	11	Non-industrial spraying.
	13	Treatment of articles by dipping and pouring.

HH-12.2 Controlling worker exposure

Product characteristics	Detergents are liquids generally contain 0.5% boron.	
Amounts used	Depends on the object to clean.	
Frequency and duration of use	Daily 8-hour shift.	
Human factors not influenced by risk management	None	
Other given operational conditions affecting workers exposure	Activities take place in well-ventilated areas.	
Technical conditions and measures at process level (source) to prevent release	None	
Technical conditions and measures to control dispersion from source towards the worker	Dispensers may be used to prevent skin contact or splashing.	
Organisational measures to prevent /limit releases, dispersion and exposure	Appropriate training.	
Conditions and measures related to personal protection, hygiene and health evaluation	Clothing	-
	Gloves	Not required for normal industrial exposure
	Eye protection	-
	RPE	-

HH-12.3. Exposure estimation

		INHALATION					
		Activity	Source/ Parameters	RMM	Value 8h TWA mg B/m ³	RCR DNEL = 1.45 mg B/m ³	
Human Health Exposure Estimations	Modelled (ART)	Spraying of detergents	Large scale cleaning		Large scale spraying: 0.01	Large scale spraying: 0.007	
			DERMAL				
		Activity	Source/ Parameters	RMM	Value mg B/day	RCR DNEL = 4800 mg B/day	
	Modelled (MEASE)	Spraying of detergents	Physical form	liquid	-	0.024	>0.001
			Content	< 1% boron			
			PROC	7			
			Duration	> 240 min			
Use pattern			wide dispersive				
Handling	non-direct						
Contact level	intermittent						

HH-12.4. 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).