

HH-36.1. Occupational scenario for professional installation of cellulose insulation

Systematic title based on use descriptor	PROCs	
	21	Low energy manipulation of substances bound in materials/articles.

HH-36.2 Controlling worker exposure

Product characteristics	The boron-containing insulation contains between 1.5 and 3.6% boron.	
Amounts used	Depends on the area, the building site and travelling between sites.	
Frequency and duration of use	Professional insulation installers would carry out this work every day, up to eight hours per day.	
Human factors not influenced by risk management	None	
Other given operational conditions affecting workers exposure	Activities take place indoors often in reasonably confined spaces.	
Technical conditions and measures at process level (source) to prevent release	In some cases, the cellulose insulation is wetted.	
Technical conditions and measures to control dispersion from source towards the worker	None	
Organisational measures to prevent /limit releases, dispersion and exposure	Appropriate training.	
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	P1/P2 required where exposure is above the DNEL

HH-36.3. 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	Installation of cellulose insulation	90P Measured data (87 datapoints)	-	0.3 (90P)	0.21	
Human Health Exposure Estimations	DERMAL						
		Activity	Source/ Parameters	RMM	Value mg B/day	RCR DNEL = 4800 mg B/day	
	Modelled (MEASE)	Installation of cellulose insulation	Physical form	high dustiness	-	0.15	<0.001
			Content	1 – 5 % boron			
			PROC	21			
			Duration	> 240 min			
			Use pattern	wide dispersive			
Handling			non direct				
Contact level	extensive						

HH-36.4. 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).