

# Nanomaterials Control Banding Tool Risk Assessment Form

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material(s) (chemical name, CAS number, hazard and precaution statements) from SDS	
Production Description (e.g. vapour phase, solid phase, liquid phase techniques)	

Task Description

Risk Level (RL) matrix as a function of severity and probability					
		EXPOSURE PROBABILITY			
		Extremely Unlikely (0-25)	Less Likely (26-50)	Likely (51-75)	Probable (76-100)
H A Z A R D  S E V E R I T Y	Very High (76-100)	RL 3	RL 3	RL 4	RL 4
	High (51-75)	RL 2	RL 2	RL 3	RL 4
	Medium (26-50)	RL 1	RL 1	RL 2	RL 3
	Low (0-25)	RL 1	RL 1	RL 1	RL 2

Control Bands: (based on the overall RL)

RL 1: General ventilation

RL 2: Fume cupboards or local exhaust ventilation

RL 3: Containment e.g. glove box.

RL 4: Seek specialist advice



Hazard severity determination descriptor of parent material	Severity Score (Max score =100)	Notes/Comments/Toxicology references
Toxicity: OEL (occupational exposure limit) <10 g/m <sup>3</sup> = 10 points 10 – 100 g/m <sup>3</sup> = 5 points 101 g/m <sup>3</sup> – 1 mg/m <sup>3</sup> = 2.5 points >1 mg/m <sup>3</sup> = 0 points Unknown = 7.5 points		
Carcinogenicity of parent material Yes = 4 points No = 0 points Unknown = 3 points		
Reproductive toxicity of parent material Yes = 4 points No = 0 points Unknown = 3 points		
Mutagenicity of parent material Yes = 4 points No = 0 points Unknown = 3 points		
Dermal hazard potential of parent material Yes = 4 points No = 0 points Unknown = 3 points		
Asthmagen potential of parent material Yes = 4 points No = 0 points Unknown = 3 points		
TOTAL hazard severity score		Enter score on Matrix (page2)

\*having unequal physical properties along different axes

Exposure probability determination descriptor	Severity Score (Max score =100)	Notes/Comments
Dustiness/mistiness High = 30 points Medium = 15 points Low = 7.5 points None* = 0 points Unknown surface reactivity = 22 points  * A result of "none" automatically causes overall exposure probability score to be "extremely unlikely".		
Estimated amount of nanomaterial used during task > 100 mg = 25 points 11 – 100 mg = 12.5 points 0 – 10 mg = 6.25 points Unknown surface reactivity = 18.75 points		
Number of employees with similar exposure > 15 = 15 points 11 – 15 = 10 points 6 – 10 = 5 points 1 – 5 = 0 points Unknown = 11.25 points		
Frequency of operation = 6.25 points		

