

Supplemental information

Table (split in three parts for readability) showing the proposed hazard group allocation based on the e-COSHH Essentials tool, reproduced from [21].

	Category A	Category B	Category C	Category D	Category E
	No significant risk to health	Slight Hazard – Slightly toxic	Moderate Hazard	Serious hazard	Severe hazard
<i>OEL dust mg/m³</i>	1-10	0.1-1	0.01 - 0.1	< 0.01	Seek specialist advice
<i>Acute Toxicity</i>	Low	Low / Moderate R20;R21;R22 Acute tox. 4	Moderate R23;R24;R25 Acute tox. 3	High R26;R27;R28 Acute tox. 1-2	
<i>LD50 oral route mg/kg</i>	> 2000 > 2000	200-2000 300-2000	25-200 50-300	<25 <50	
<i>LD50 dermal route mg/kg</i>	> 2000 > 2000	400-2000 1000-2000	50 – 400 200 - 1000	<50 <200	
<i>LC50 inhalation 4H (mg/l)</i> <i>Aerosols/particles</i>	> 5 > 5	1- 5 1- 5	0.25 – 1 0.5 - 1	<0.25 < 0.5	-
<i>Severity of Acute (Life-Threatening) Effects</i>		Low/Moderate R68/Xn-R67-R65 STOT SE 2-3; Asp. Tox. 1	Moderate/High R39/T STOT SE 1	High (e.g. R39/T+)	-
<i>Adverse effects per oral route (mg/kg) (single exposure)</i>	-	Adverse effects seen ≤ 2000 (Xn) ≤ 2000	Adverse effects seen ≤ 200 (T) ≤ 300	Adverse effects seen ≤ 25 (T+) -	-
<i>Adverse effects per dermal route (mg/kg) (single exposure)</i>	-	Adverse effects seen ≤ 2000 (Xn) ≤ 2000	Adverse effects seen ≤ 400 (T) ≤ 1000	Adverse effects seen ≤ 50 (T+) -	-
<i>Adverse effects by Inhalation / 4H (mg/l)</i> <i>Aerosols/particles (single exposure)</i>	-	Adverse effects seen ≤ 5(Xn) ≤ 5	Adverse effects seen ≤ 1 (T) ≤ 1	Adverse effects seen ≤ 0.25 (T+) -	-

	Category A	Category B	Category C	Category D	Category E
	No significant risk to health	Slight Hazard – Slightly toxic	Moderate Hazard	Serious hazard	Severe hazard
Sensitisation	Negative	Slight cutaneous allergic reactions	Moderate / strong cutaneous allergic reactions (e.g. R43) Skin sens. 1	-	Prevalent moderate to strong respiratory allergic reactions R42; R42/43 Resp. sens. 1
Mutagenicity/ Genotoxicity	Negative	Negative	Negative	Negative	Mutagenic in most relevant <i>in vivo</i> and <i>in vitro</i> assays. R68 (cat. 3) Muta 2 R46 (cat.1 -2) Muta 1A – 1B
Irritant/ Corrosiveness	None to Irritant R36; R38; R66 Eye Irrit. 2; skin Irrit. 2 EUH 066	-	Severe irritant skin/eyes Irritant to respiratory tract R37; R41 STOT SE 3; Eye Dam. 1 Corrosive (e.g. R34;R35) Skin Corr. 1A – 1B	-	-

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	No significant risk to health	Slight Hazard – Slightly toxic	Moderate Hazard	Serious hazard	Severe hazard
<i>Carcinogenicity</i>	Negative	Negative	Some evidence in animals R40 cat.3 Carc. 2	-	Confirmed in animals or humans. R45; R49 (cat.1-2) Carc. 1A – 1B
<i>Developmental/ Reproductive toxicity</i>	Negative	Negative	Negative	Reprotoxic defects in animals and/or suspected or proved in humans R60;R61.R62;R63 (cat.1-2-3)) Repr. 1A, 1B, 2	
<i>Likelihood of Chronic Effects (e.g. Systemic)</i>	Unlikely	Unlikely	Possible R48/Xn STOT RE 2	Probable R48/T STOT RE 2	
<i>Adverse effects per oral route (mg/kg-day) (90 day chronic study*)</i>			Adverse effects seen ≤ 50 (Xn) ≤ 100	Adverse effects seen ≤ or 5 (T) ≤ 10	
<i>Adverse effects per dermal route (mg/kg-day) (90 day chronic study*)</i>			Adverse effects seen ≤ 100 (Xn) ≤ 200	Adverse effects seen ≤ 10 (T) ≤ 20	
<i>Adverse effects by Inhalation / 6H (mg/l-day) Aerosols/particles (90 day chronic study*)</i>			Adverse effects seen ≤ 0.25 (Xn) ≤ 0.2	Adverse effects seen ≤ 0.025 (T) ≤ 0.02	
<i>Reversibility of Chronic Health Effects</i>	Readily reversible	Readily reversible	Moderately reversible	Slowly reversible	Irreversible
<i>IH/Occupational Health Experience</i>	No evidence of adverse health effects	Low evidence of adverse health effects	Probable evidence of adverse health effects	High evidence of adverse health effects	High evidence of severe adverse health effects