

APPENDIX 1: NanoRiskCat●●●|●● Template

Literature methodology/sources of information

The following sources of information were used to fill out the NanoRiskCat●●●|●● for nanoZinc:

1. Relevant literature was identified through ICON The Virtual Journal of Nanotechnology Environment, Health and Safety <http://www.icon.rice.edu/advancedsearch.cfm> searching for articles that use “Zinc” in Keyword(s) or Word(s) in the Abstract.

Human hazard profile

1. **HARN: Does the nanomaterial fulfill the HARN paradigm?**

Answer: No data

Arguments and explanation: No information available

2. **Bulk – “Level A CLP”: Is the bulk form of the nanomaterial known to cause or may cause serious damaging effects?**

Answer: No

Arguments and explanation: Zn is not classified in the Annex VI of Regulation (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006

3. **Bulk – “Level B CLP”: Is the bulk form of the nanomaterial classified for other less adverse effects according to the CLP?**

Answer: No

Arguments and explanation: Zn is not classified in the Annex VI of Regulation (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending

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and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006

4. Nano – Acute toxicity: Is the specific nanomaterial known to be acute toxic?

Answer: No data

Arguments and explanation: No information available

5. Are there indications that the nanomaterial causes genotoxic-, mutagenic-, carcinogenic-, respiratory-, cardiovascular, neurotoxic or reproductive effects in humans and/or laboratory animals or has organ-specific accumulation been documented?

Answer: No data

Arguments and explanation:

- a. Genotoxicity and mutagenicity: No information available
- b. Respiratory tract toxicity: No information available
- c. Cardiovascular toxicity: No information available
- d. Neurotoxicity: No information available
- e. Reproductive damage: No information available
- f. Carcinogenicity: No information available
- g. Does the nanomaterial accumulate in tissue and/or organs?:

No information available

6. Overall evaluation of human hazard

We conclude that the color-code that best reflects the human hazard profile of the nanomaterial used is  as no information is available on human health hazards of nano Zn

Environment hazard profile

1. Bulk – “Level A CLP”: Is the bulk form of the nanomaterial classified as CLP Acute 1 or Chronic 1 or Chronic 2?

Answer: No

Arguments and explanation: Zn is not classified in the Annex VI of Regulation (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006

2. Nano – $LC_{50} < 10$ mg/l: Is the nanomaterial in question reported to be hazardous to environmental species i.e. LC50 or EC 50 < 10 mg/l?

Answer: No data

Arguments and explanation: No information available

3. Bulk – “Level B CLP”: Is the bulk form of the nanomaterial classified as CLP Chronic 3 or Chronic 4 or documented nano-specific effects?

Answer: No

Arguments and explanation: Zn is not classified in the Annex VI of Regulation (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006

4. Nano – $LC_{50} < 100$ mg/l: Is the nanomaterial in question reported to be hazardous to environmental species i.e. LC50 or EC 50 < 100 mg/l?

Answer: No data

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Arguments and explanation: No information available

5. $T_{1/2} > 40$ days: Is the nanomaterial in question persistent i.e. $T_{1/2} > 40$ days?

Answer: No data

Arguments and explanation: No information available

6. $BCF > 50$: Is the nanomaterial in question bioaccumulative i.e. $BCF > 50$?

Answer: No data

Arguments and explanation: No information available

7. Dispersive or long-range transport, ecosystem effects?

Answer: No data

Arguments and explanation: No information available

8. Overall evaluation of environmental hazard

We conclude that the color-code that best reflects the environmental hazard profile of the nanomaterial used is  as no information is available on human health hazards of nanoZn