

Guideline /Test method	Species	Endpoint / Type of test	Exposure		Results			Remarks	Reference
			Design	Duration	NOEC	LOEC	EC/ LC ₅₀		
N/A	Honeybee and other beneficial arthropods	Acute toxicity	N/A	N/A	N/A	N/A	N/A	It is scientifically unjustified to conduct this study since nitrogen is inert, not intrinsically hazardous and already forms 78.1% v/v of the atmosphere. The use of nitrogen, as described elsewhere in this application, will never elevate levels of nitrogen beyond normal atmospheric or terrestrial ranges. The environmental exposure scenario shows there is no risk of secondary poisoning under normal conditions of use.	Document IIIA, section 7.5.4.1
N/A	Other terrestrial non-target organism	N/A	N/A	N/A	N/A	N/A	N/A	It is scientifically unjustified to conduct this study since nitrogen is inert, not intrinsically hazardous and already forms 78.1% v/v of the atmosphere. The use of nitrogen, as described elsewhere in this application, will never elevate levels of nitrogen beyond normal atmospheric or terrestrial ranges. The environmental exposure scenario shows there is no risk to the terrestrial compartment and no risk of secondary poisoning under normal conditions of use.	Document IIIA, section 7.5.6
N/A	Mammals	N/A	N/A	N/A	N/A	N/A	N/A	The environmental risk assessment for silicon dioxide does not indicate that it poses a risk to the terrestrial environment. The toxicity profile of nitrogen as shown in Document IIIA, section 6 does not indicate a concern regarding toxicity to mammals. Therefore it is not considered necessary to determine the effect of increased nitrogen exposure to mammals. Given the above justification, it is not necessary to submit data to meet the following data end points: 7.5.7.1.1 Acute oral toxicity (mammals) 7.5.7.1.2 Short term toxicity (mammals) 7.5.7.1.3 Effects on reproduction (mammals) Note that these points have been addressed for nitrogen in Document IIIA, section 6. Further studies are not required.	Document IIIA, section 7.5.7.1.1 Document IIIA, section 7.5.7.1.2 Document IIIA, section 7.5.7.1.3

Footnotes

1. It is scientifically unjustified to submit further studies on the effects of nitrogen on the reproduction of earthworms or other soil non-target macro-organisms (the data requirements detailed in Document IIIA, section 7.5.2.1) since nitrogen is inert, not intrinsically hazardous and already forms 78.1% v/v of the atmosphere.
2. It is scientifically unjustified to submit further studies on the long-term effects of nitrogen on terrestrial plants (the data requirements detailed in Document IIIA, section 7.5.2.2), since nitrogen is inert, not intrinsically hazardous and already forms 78.1% v/v of the atmosphere.
3. Please refer also to the Nitrogen Data Waiver at the beginning of Document IIA.

4.2.4 Non compartment specific effects relevant to the food chain (secondary poisoning)

Result
Nitrogen does not have any intrinsic properties which suggest it will bioaccumulate in the environment. In addition, nitrogen is not classified as hazardous to health according to EC Directive 67/548/EEC, nor are there any indications of toxicity such as endocrine disruption. The toxicity profile of nitrogen, coupled with the fact that it is unlikely to accumulate in the environment, means that there is no risk of secondary poisoning.

5. HAZARD IDENTIFICATION FOR PHYSICO-CHEMICAL PROPERTIES

a. Thermal stability and identity of relevant breakdown products

Nitrogen gas is thermodynamically stable and widely known to be an inert molecule that will only react with other chemicals in the presence of a catalyst (eg. lightning, nitrogen fixing bacteria, etc). The only breakdown product that nitrogen gas can form is elemental nitrogen; this will quickly combine with other chemicals to form other molecules, eg. together with oxygen to form nitrogen oxides (NO_x).

For further details refer to Document IIIA, section 3.10.

b. Flammability and flash point

Nitrogen is a non-flammable gas which does not support combustion. The flash-point of nitrogen cannot be determined because it is a gas at the normal temperatures and pressures which it will be used as a biocide. (Flash point data can only be determined for liquids).

For further details refer to Document IIIA, section 3.11 and 3.12.

c. Explosive properties

Nitrogen is thermodynamically stable, so does not exhibit explosive properties.

For further details refer to Document IIIA, section 3.15

d. Oxidising properties

Oxidising properties of nitrogen cannot be determined because it is a gas at the normal temperatures and pressures which it will be used as a biocide. (Oxidising properties can only be determined for solids).

For further details refer to Document IIIA, section 3.16

e. Reactivity towards container material

Nitrogen is supplied in containers designed and manufactured in accordance with BS 5045-1:1982. Containers manufactured to this specification will ensure that there is no reactivity between contents and containers.

For further details refer to Document IIIA, section 3.17