Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals

Sub-Committee of Experts on the Transport of Dangerous Goods

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Explosives and related matters: miscellaneous

Additional data on proposal ST/SG/AC.10/C.3/2022/9 - 5-Trifluoromethyltetrazole, sodium salt (TFMT-Na) in acetone

Submitted by the European Chemical Industry Council (Cefic)

Results of corrosivity and toxicity testing

- 1. This informal document is a supplement to official document ST/SG/AC.10/C.3/2022/9 proposing to introduce a new entry for the title compound in acetone as a desensitized explosive.
- 2. As reported in previous papers and discussions, finding a test laboratory for the evaluation of toxicological properties proved to be a huge challenge due to the explosive properties of the ingredient.
- 3. Cefic thanks the expert from Poland for recommending a qualified laboratory for the conduct of toxicological studies, which was able to solve the challenges in handling this substance and to successfully perform the appropriate tests.
- 4. The studies were carried out in accordance with the specified OECD test guidelines in adherence of the Good Laboratory Practices (GLP) quality requirements. The concentration of TFMT-Na in acetone was 29.1 % by weight in all studies.
- 5. The following results were obtained:

Study type	OECD Test method	Procedure	Dose [mg/kg]	Result
Acute oral toxicity	423	Female Wistar rats	300 (fixed)	Number of deaths: 0 out of 6 animals; no macroscopic changes in gross necropsy
			2000 (fixed)	examination. LD 50 > 2000 mg/kg
In vitro skin corrosion	431	Reconstructed human epidermis test		Non-corrosive
Acute dermal toxicity	402	Female Wistar rats	2000 (fixed)	Number of deaths: 0 out of 3 animals; no clinical and no macroscopic changes. LD 50 > 2000 mg/kg

- 6. For legal reasons, only the final test results are given in this informal paper. Further details are available through the expert from the Cefic delegation; contact Dieter.Heitkamp@bayer.com.
- 7. A study for inhalation toxicity could not be performed due to technical reasons. However, from the current data set only a very low hazard for this endpoint is to be anticipated.

Conclusion

8. 5-Trifluoromethyltetrazole, sodium salt (TFMT-Na) in acetone has no toxicity hazard according to Chapter 2.6 of the UN Model Regulations.