Informal correspondence group on polymerizing substances and self-accelerating polymerization temperature (SAPT)

Submitted by the representative of European Chemical Industry Council (Cefic) on behalf of the informal correspondence group

I. Introduction

1. During the sixty-second session of the Sub-Committee of Experts on the Transport of Dangerous Goods, Cefic and DGAC submitted information document INF.3 on the applicability of the Self-Accelerating Polymerization Temperature (SAPT) used for Polymerizing Substances.

2. Background was a proposal submitted to the International Maritime Organization (IMO), Sub-Committee on Carriage of Cargoes and Containers (CCC) at its eighth session, document CCC 8/6/11, in which it was proposed to require the SAPT to be included in the transport documentation.

3. Cefic and DGAC noted that SAPTs do not ensure safety, and there are other industry best practices for ensuring stabilizer is present. These practices work very well, but regulation needs to recognize these practices. Cefic and DGAC requested an informal correspondence group (ICG) to continue this work.

4. This information was discussed in the Explosives Working Group (EWG) and the EWG agreed that specific SAPTs do not ensure the safe transport of these polymerizing substances. The EWG agreed that an ICG could work on evaluating industry best practices for ensuring stabilizer is present and effective to ensure safety in transport.

II. Informal correspondence group (ICG)

5. The first ICG was held on 14 November, 2023, and hosted by BAM, in Berlin, Germany. Attendees (authorities and industries) were from Belgium, China, France, Germany, The Netherlands, Spain, United Kingdom, United States, Cefic and DGAC. The aim of this meeting was to create awareness about the issues around the applicability and determination of the SAPT.

6. In addition, it was concluded that no discussion is needed on the SADT as the system works well for decades. Aspects discussed were:
   - Awareness of SAPT, the difficulties and pitfalls of measuring the SAPT of stabilized systems – focus on Polymerizing Induction Time (PIT)
   - Definition of polymerizing substances
   - Criteria for classification
   - Non-stabilized and stabilized systems
• Criteria for temperature control
• Determination of PIT – test series H of the manual of tests and criteria
• Special provision SP386 – transport/ supply chain times

7. During this first meeting, it was concluded that the SAPT is not the correct safety parameter to be used and cannot be determined for stabilized Polymerizing Substances. There was general support to focus on the so-called Polymerizing Induction Time (PIT) as this is the parameter to be used to guarantee safe transport. It can also be used in relation to SP386.

III. Path forward

8. It was agreed to have a next ICG in Spring 2024. After that meeting it is proposed to have a next discussion in the EWG, during the sixty-fourth session in June/July 2024.