DESCRIPTION AND CAUSE OF EVENT

A chemical reaction took place in an intermediate bulk container in which the first rinseates from line flushing of several formulation filling lines are combined. Temperature rose up to approx. 60°C, the pressure relief in the cap opened, fog was visible, and a strong smell occurred. Most probably a reaction took place between two different products (thio amide product and phosphoric acid containing product) under formation of H₂S.

LESSONS LEARNED / GOOD PRACTICE

The combination of different rinseates was previously not considered to be a risk in terms of reactivity. However, in this case at the interface of two phases that existed in the container the reaction with the described consequences started. As a consequence and lesson learned the criticality of products with regard to mutual reactivity should always be assessed prior to mixing rinseates. Depending on the result of this assessment preventive measures might need be taken. One possibility is to collect rinseates from flushing of formulation and/or filling lines always line- and product-specific to avoid any risk of reaction of two incompatible product.