Notes on handling peracetic acid safely

The following products offered by Dr. Weigert are highly effective peracetic acid-based disinfectants:

neoseptal® PE
neoseptal® S-PE
neodisher® Septo PAC
neodisher endo® SEPT PAC
neoseptal® PE sauer
neoseptal® PE 15
neomoscan® CPdes 400
AdaptaCide PAA-C

For safety reasons, the peracetic acid content is below 17%. When handling peracetic acid products, please heed the following instructions, which are based on German regulations for handling organic peroxides:

Peracetic acid (PAA) is a highly effective and ecologically safe disinfectant which is to be used as a preferred replacement for chlorine bleach.

PAA has an oxidising effect, although it can break down with auto-acceleration and is sensitive to external heating and contamination. The decomposition leads to anything from heating through to boiling and deflagration. The risk increases significantly according to the concentration of PAA and the container size. Faults arising with the handling of the chemical cannot be ruled out with certainty in applications in the food industry, in laundry technology and in agriculture. With a knowledge of the operating conditions of its customers and with the benefit of many years of experience in the production and application of PAA, Dr. Weigert normally only offers peracetic acid products with a maximum capacity of up to 220 litres. However, IBCs can also be used safely under particular operational preconditions. They satisfy the stringent criteria for the updated commitment made by members of the IHO (Industrieverband Hygiene und Oberflächenschutz/German Association for Hygiene and Surface Protection) and thus minimise the risks or rule them out. The PAA itself must also satisfy stringent stability criteria, particularly when marketed in IBCs.

PAA above 15% may only be decanted into containers made from PE or PVC for periods longer than six months if they have undergone special type-testing. The packaging materials used by Dr. Weigert are licensed for this purpose. The expiry date for the PAA solution must be complied with in any event, including to avoid material fatigue.

At concentrations above 17% PAA there may be a risk of explosion within the meaning of the German Explosions Act. Strict statutory requirements apply that rarely have to be met other than in chemical industrial facilities. Therefore, Dr. Weigert does not offer PAA above 15% (w/w).

The following recommendations apply for handling PAA < 15%:

- For safety reasons, PAA must be transported and stored under cool conditions. Neither containers nor transport vehicles may be placed in direct sunlight or in warm operating facilities.
- Please refer to Chapter 7 of the appropriate safety data sheet for details of which storage temperature is recommended for which product. Unless otherwise indicated, storage at < 30°C is recommended.
- PAA should only be stored in and metered from original containers.
- Leftovers must never be poured back into the containers.
- The original containers are equipped with a special degassing lock and must therefore always be stored upright. The degassing valves must not be blocked (covered, sealed, clogged).
- Further measures are necessary if special circumstances exist within enterprises. If necessary, please contact us to discuss this.
- PAA must not be enclosed in pipes between valves and must not be used in closed systems (such as spray equipment).

DR. WEIGERT
Chemische Fabrik Dr. Weigert GmbH & Co. KG
Mühlenhagen 85, D – 20539 Hamburg
Telephone: (040) 789 60-0
Telefax: (040) 789 60 – 120
E-mail: info@drweigert.de
Internet: www.drweigert.de

- Containers and pipes must have venting devices which are secured to prevent the ingress of dirt.
- PAA may only come into contact with suitable materials. This also concerns the user's metering devices and pipe systems. **Suitable:** glass, porcelain, acid-resistant glazed earthenware, PTFE, PE and hard PVC (however, under certain circumstances there may be a risk of embrittlement in the case of the latter). **Unsuitable:** for example, natural rubber, synthetic rubber, soft PVC, aluminium, iron/steel, brass and copper.
- Only tapping equipment that is specially intended for PAA may be used in order to rule out the possibility of confusion and mixing.
- It is imperative that all contamination is avoided. Cigarette ash, rust, mud flaps, metal chips, coins, organic dirt, etc. are particularly dangerous.
- PAA must never be mixed with other chemicals (such as alkalis, acids and detergent concentrates).
- Caps other than caps on the container intended for tapping must be closed permanently to prevent the ingress of foreign matter. There is a risk of contamination with any tapping / connection of metering devices: therefore, only insert the tapping device once if possible and never decant the solution into another vessel.
- General national regulations on handling hazardous substances must also be complied with.

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