

## Instructions regarding use of HDPE canisters and drums (High Density Polyethylene)

To the best of our knowledge, Huchem supports you when selecting an appropriate packaging for your filling material. Influences like filling temperature, duration of storage or transport circumstances are essential for the right choice. The filler is responsible for the product compatibility of the filling material with our packaging. Please check the compatibility of your products with the seals of our closures being used.

### Storage of an empty container

- The stored containers must be protected against direct sunlight.
- We recommend a weather-resistant storage.
- Please avoid changing ambient temperatures.

### Handling of filled containers / Transport securing of pallet shipment

- Only use pallets in technical good condition. The canisters could be damaged by outstanding nails or splintering.
- Packing containers on pallets a stable stand has to be ensured. Missing planks could influence the stability and stacking capacity of the containers.
- The containers are only to be moved using the handles provided for this purpose.
- Only canisters of the same type are allowed to be stacked on top of each other.
- Please make sure through own testing that the containers are sufficiently protected by the use of efficient and adjusted securing methods during transport. For example, it can happen that by doing the stretch wrapping too firmly especially lighter canisters can be deformed. For the protection of the canisters we recommend the usage of protective plastic corners or cardboard.
- When shrink wrapping particular care needs to be taken to a solid connection between shrink hood and pallet.
- Containers with integrated degassing must be stored and transported in an upright position. Incorrect handling may affect the functioning of the venting membrane.
- Please make sure, that filled canisters are stored protected against direct sunlight (UV-radiation).
- Follow the instructions of the MSDS (Material Safety Data Sheet) of the used filling product regarding storage and transport recommendations.

### Closing of containers

- We recommend the following tightening torques for closures with PE-foam seals:
  - closure 51 → 20–22 Nm
  - closure 61 → 23–25 Nm
  - closure 71 → 24–26 Nm
- Please determine the optimum torque for your containers/closures in own test. Depending on the seal type or closure system it is possible that the optimum torque differs from our general recommendations. The manufacturer's label of the seals used is to be mirrored in the certification documents of the respective container. If this data does not match, the hazardous goods approval will expire. Canisters and seals are only approved in combination of storage and transport.

- Please make sure, that filled canisters are stored protected against direct sunlight (UV-radiation). Follow the instructions of the MSDS (Material Safety Data Sheet) of the used filling product regarding storage and transport recommendations.

### **Stacking height of the filled packaging**

- All UN-approved containers have performed a stacking test. During this test there shall be no leakage of the filling, but a deformation may be possible. Therefore, these test results have no significance on an optical faultless stacking.
- For being able to deliver your end customer a filled container that is in a technically and visually optimal condition we kindly ask you to determine the maximum stacking height in own tests, since it depends on many important, individual factors, such as filling-, storage- and transport circumstances.

### **Filling Temperature**

- Only after re-cooling down to the ambient temperature after a hot filling the containers are allowed to be sealed and stacked.
- A filling over 60 degrees Celsius could have a negative influence on the characteristics of HDPE. We recommend checking on the chemical compatibility of the filling material with the packaging.
- Please make sure that the container is standing on a level and firm surface while filling.

### **UN marking and other references**

- All UN-approved canisters are marked with an embossing. The maximum approval is a result of the certification including water. All other test results can be found in the UN-approval.
- The resulting value of the hydraulic internal pressure test specifies the maximum test pressure for 30 minutes. This value cannot be used for the evaluation of a suitable overpressure to empty the container.
- The specified overrun volume of the canisters is indicated as a "circa" quantity.

### **Note**

Please note that all information and recommendations are based on our actual knowledge and experiences. The user cannot be exempted from own trials. A legally binding way cannot be derived from this statement. Our customers have to consider existing and relevant laws and regulations on one's own authority.