



## DESCRIPTION

### Product description

Phase change materials, also known as latent heat storage materials, absorb heat during melting and release it again during crystallization/freezing. This allows the required storage temperature to be maintained for the duration of transport. Heat or cold entering the transport container is absorbed by the PCM during the phase transition from solid to liquid and vice versa.

## FEATURES

While the use of water is limited by its melting point of 0°C, the va-Q-accus operate within a standard temperature range of -67°C to +70°C through the use of special paraffines and salts. In addition, there are other customer-specific solutions. In general, the innovative PCM technology allows the use of a universal accu configuration and pack-out for all seasons and climatic zones. Possible areas of application are the temperature control of pharmaceuticals, biotech products, blood preserves, etc.

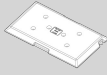
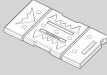
## PROPERTIES

Shell material	HDPE
Closure	Polymer plug / Aluminium cap / Polymer cap
Color	colorless
Closure color	White
Filling	phase change material
Latent heat	≥ 220 kJ/kg
Density	1.18 g/cm <sup>3</sup>
Melting range	-21.0 °C to -19.0 °C
Freezing range	-22.0 °C to -25.0 °C
Physical state	liquid
Application area	-25.0 °C to -15.0 °C
Recommended storage temperature	+15 °C to +25 °C
Temperature resistance	-40 °C to +50 °C

## TEST STANDARDS

Our va-Q-accus are subjected to standardized and customized testing procedures to confirm their unique properties.

**DIMENSIONS AND WEIGHT**

Designation	Length [mm]	Width [mm]	Thickness [mm]	Geometric shape	
					
va-Q-accu 02L -21G	165 ± 2	88 ± 2	20 ± 1		cuboid
va-Q-accu 10L -21G	120 ± 2	160 ± 2	40 ± 1		cuboid
va-Q-accu -21G 15153	145 ± 2	145 ± 2	29 ± 1		cuboid
va-Q-accu -21G 22223	216 ± 2	216 ± 2	26.6 ± 1	edge-fit	
va-Q-accu -21G 22224	216 ± 2	216 ± 2	34 ± 1	edge-fit	
va-Q-accu -21G 24163	240 ± 2	161 ± 2	28 ± 1		cuboid
va-Q-accu -21G 26262	255 ± 2	255 ± 2	20 ± 1	edge-fit	
va-Q-accu -21G 26263	255 ± 2	254 ± 2	32 ± 1	edge-fit	
va-Q-accu 27L -21G	470 ± 2	275 ± 2	32 ± 1		cuboid
va-Q-accu -21G 36262	355 ± 2	255 ± 2	20 ± 1	edge-fit	
va-Q-accu -21G 36263	355 ± 2	233 ± 2	32 ± 1	edge-fit	
va-Q-accu -21G 36362	355 ± 2	355 ± 2	20 ± 1	edge-fit	
va-Q-accu -21G 36363	355 ± 2	355 ± 2	30 ± 1	edge-fit	
va-Q-accu -21G 44253	437 ± 2	246 ± 2	28 ± 1		cuboid
va-Q-accu -21G 46262	455 ± 2	255 ± 2	20 ± 1	edge-fit	
va-Q-accu -21G 46263	455 ± 2	255 ± 2	30 ± 1	edge-fit	
va-Q-accu -21G 46362	455 ± 2	355 ± 2	20 ± 1	edge-fit	
va-Q-accu -21G 46363	455 ± 2	355 ± 2	30 ± 1	edge-fit	
va-Q-accu -21G 46462	455 ± 2	455 ± 2	20 ± 1	edge-fit	
va-Q-accu -21G 46463	455 ± 2	455 ± 2	30 ± 1	edge-fit	
va-Q-accu -21G 60502	600 ± 2	500 ± 2	22 ± 1		cuboid

Other temperature battery sizes and filling weights available on request

### Legal Disclaimer

The data presented in this technical data sheet are in accordance with the current state of knowledge. The data provided are based on standardized test procedures carried out under laboratory conditions and do not necessarily correspond to the actual properties under real conditions of use. All measured values and properties proposed in this data sheet (e.g., lifetime) were determined under test conditions in the laboratory and therefore represent a non-binding and purely scientific value. The information in the Technical Data Sheet does not constitute any warranty as to the existence of certain properties irrespective of the type of use and no warranty as to the suitability for certain purposes and does not constitute any warranty as to quality or guarantees of properties. Only the applicable statutory or respectively mutually agreed warranty period and warranty rights shall apply. Proposals for usage and applications do not constitute a guarantee, warranty, or representation of suitability for such a specific purpose. The user is responsible for ensuring that the product is suitable and compatible for his own purposes, unless, the suitability for a specific purpose is expressly mutually agreed between the parties. The user shall perform his own tests and experiments regarding the suitability and processing of the product described herein for his individual purposes and applications. We reserve the right to change the product values and features, including but not limited to a change in the current state of knowledge according to section 1. The respective current version of this technical data sheet published on our website applies. Copyright and ownership of the provided data as well as all other copyrightable or protectable contents remain with va-Q-tec. In particular, it is prohibited to copy information from this technical data sheet in whole or in part and to directly or indirectly use it for own commercial purposes, in particular vis-à-vis third parties.