

Ice-Water Resistant Labelling Adhesive

Tips & Tricks No. 1



The term ice-water resistance is associated with different ideas and expectations. The demands are usually not very specific and are often viewed differently or are subject to different expectations depending on the region and customer group: good running properties, good cleanability, low consumption, high initial adhesive strength and (naturally) 72 hour ice-water resistance.

There is no generally recognized or obligatory test method for determining the ice-water resistance of a labelling adhesive. We are usually talking of a not-standardised, in-house standard, in the case of both the customer and the various adhesive suppliers. Comparisons are therefore rarely available. What are possible, however, are exemplary statements or test series with defined methods and/or always repeated operating procedures. These can be carried out in a laboratory area and can be (partly) transferred to practice. It presupposes, however, that the machine settings and the materials used are selected to be similar to those of the test methods (e.g. in respect of glue spread, paper quality).

Just some of the differences in the measurement and evaluation of "ice-water-resistant" are outlined below. Tests vary with:

- empty bottles, filled bottles (with product at original filling temperature), filled bottles (different water temperatures), circulating, cold water
- different drying times and drying methods
- insert the bottles into ice water, insert the bottles into water kept at a moderate temperature
- movement of the bottles in the ice water
- evaluation of the detachment in time intervals (h, ½ h)
- different time measurement and evaluation in the case of "partial" separation (corners)
- different interpretation, when there is separation of a label.

A large influence on the ice-water resistance and/or replacement time is exerted, in particular, by:

- the label: paper and pressure
- the adhesive spread (tends to be the more the better)
- drying time and the drying method (tends to be the longer the better)

To establish test conditions which are in line with standard usage, a time interval of at least 7 days should be set because of the time elapsing between the labelling of the product and its delivery to the customer. This is not necessarily defined in this way.

Of course the customer expects the labelling adhesive not only to run cleanly and splash-free on his equipment but also to have good cleaning properties. The evaluation of the ice-water resistant labelling adhesive also often takes place (particularly abroad) by a labelling technique, which no longer corresponds to the latest state of the art.

Also it must be seen that logically the requirement for "ice-water resistance" runs counter to expectations of good cleaning properties. On the one hand, the adhesive has to hold the label on a bottle for a long time while lying in the ice-water bath, but on the other hand it should have good water solubility.

With Castac 11700 labelling adhesive, which has been successfully marketed for several years, cph offers an ice-water resistant product, which ensures an optimal coverage of the various requirements.

Nevertheless, it must be borne in mind that ice-water-resistant labelling adhesives remain a speciality, which may, in the end, only be capable of meeting the specific customer needs through precise matching to individual requirements.

cph, with its great experience in the field of labelling adhesives, is able to meet this requirement profile.