

WASHING INSTRUCTIONS FOR POLYCARBONATE (PC) CHOCOLATE MOULDS

Strictly observing the cleaning instructions for chocolate moulds will extend the life of the moulds and guarantee better quality products.

Cleaning system

Too little attention is often paid to the technically correct cleaning of chocolate moulds.

Yet in terms of mechanics, chemistry, temperature and time, the cleaning process (and system) plays a decisive role in ensuring high-quality chocolate production.

We recommend that you have the cleaning system adjusted and regularly inspected by the manufacturer since, for instance, abrasive silicate particles from the cocoa mass can destroy the sensitive surface of the polycarbonate moulds if the pressure is too high!

Water

The water needs to be demineralized, preferably using a reverse osmosis system that guarantees conductivity of approx. 20 µS.

If you are using softened water the hardness of the raw water usually fluctuates between 12°F and 35°F. However, once water with a hardness of 35°F has been softened, the sodium salt content is so high that a mould that is completely free of marks after washing can no longer be guaranteed. Possible residues damage the surface of the moulds and also show up as marks on the products when they are removed from the moulds.

Under no circumstances should calcium deposits be removed mechanically, as in the case of plastic this generally results in surface scratches.

Temperature

Recommendation: max. water temperature 60 – 70°C. Higher temperatures affect the toughness of the moulds, as a hydrolytic attack can occur at such temperatures. Temperatures should be checked regularly.

Detergents

Caustic detergents (with an alkaline reaction in water) must not be used. In many cases, cleaning with warm water to which slightly acidic or slightly alkaline detergents have been added is sufficient. After alkaline cleaning, an intermediate rinsing step using distilled water is recommended, as cleaning residues may remain on the surface of the moulds and work their way in.

We urge you to check with your detergent supplier that the detergent you are using is compatible with polycarbonate.

If the moulds are cleaned in dishwashing machines/lines to remove chocolate or food, please ensure that the concentration specified by the manufacturer, usually 0.1 – 0.5%, is observed and that the temperature under no circumstances exceeds 60°C and preferably rises no higher than 55°C.

A detergent setting with a conductivity of approx. 1600 µS is sufficient and can be reduced to a conductivity of 1350 x 1420 µS if reverse osmosis water is used.

We recommend that you evaluate and set the detergent dosage together with a detergent manufacturer. Nowadays automatic dosing systems are available that monitor the suds using a conductivity measuring probe.

Rinsing

If the dosage of wetting agent (rinse aid) is too high, moulds are rinsed using water that is over-concentrated. This error can lead to a hazy, slightly greasy coating on the surface of the mould.

Make sure that you have the wetting agent's compatibility with polycarbonate checked and confirmed by your detergent supplier. Dosing must be checked regularly.

Drying

In hot air up to a maximum of 110°C. * (recommendation: 70° - 80°C)

The importance of drying the reverse of the mould properly should not be underestimated. During storage, the reverse is placed against the front of another mould. Any moisture on it therefore dries very slowly and leaves marks, which then also appear on the chocolate. The moulds must leave the cleaning system clean and dry.

Below is a checklist that will help you to avoid overlooking important points. All the information presented is based on our current knowledge and the experience we have acquired to date. This advice is provided without any obligation and is not legally binding. It is up to the user to decide whether to use this information.

Checklist:

- Are the detergent and its dosage compatible with polycarbonate?
- Are the rinse aid and its dosage compatible with polycarbonate?
- Max. temperature during washing 60 – 70°C.
- Max. temperature during drying of moulds 110°C (recommended: 70 – 80°C)
- Clean the washing machine in accordance with manufacturer's instructions (deposits in system)
- Throughput speed for moulds (quality before quantity during cleaning!)
- Any products remaining in the mould must be "removed" prior to the washing process (unnecessary interference with the cleaning process)!
- Check suds regularly – dosing (conductivity measurement)
- Check dosing of wetting agent regularly (rinse aid) – approx. 0.5 grams per liter of water (in combination with reverse osmosis water of approx. 20 µS)
- Clean cleaning nozzles/washing nozzles – risk of blockage by nuts, etc. – clean standing filter/preliminary filter regularly. Have system checked regularly by manufacturer (water pressures).
- Carry out inspection/maintenance in accordance with manufacturer's instructions.

Complying with the above instructions can extend the life of the moulds and hence increase their cost-effectiveness!