

Certificate

Safe and Hygienic Reprocessing of Laundry With Miele Professional Washing Machines From the Benchmark, 24/32 kg and Barrier Series

The Miele disinfection programmes installed ex works (thermal disinfection, chemo-thermal disinfection, Mops thermal disinfection /+rtu, Mops chemo-thermal disinfection /+rtu, Cloths thermal disinfection /+rtu, Cloths chemo-thermal disinfection /+rtu) from the Benchmark (PWM 509 and PWM 509 MoppStar, PWM 909, PWM 511 and PWM 511 MoppStar, PWM 514 and PWM 514 MoppStar, PWM 520 and PWM 520 MoppStar, PWM 912, PWM 916 and PWM 920), 24/32 kg (PW 6241 and PW 6321) and barrier machine (PW 6163, PW 6243 and PW 6323) model series correspond to the requirements pursuant to the Robert Koch Institute (RKI) and the Association for Applied Hygiene (VAH).

These strict requirements refer, inter alia, to the maintenance of temperatures in the wash liquor. These machines guarantee that selected temperatures are maintained for the time specified in the relevant programmes. In disinfection programmes, in particular, temperatures are maintained with tightly controlled hysteresis above the selected value in order to prevent any drop in temperature below the target temperature.

These machines also include further safety functions to ensure proper disinfection or to inform users in the event that disinfection is not achieved:

- **Programme lock: The machine door can only be opened at the end of a wash cycle.**
- **If, in the event of a fault, the requisite temperature is not maintained, the appropriate programme block is recommenced from the beginning**
- **Programme termination in the event of an empty supply container and 'Supply container empty' message**
- **No further water intake via detergent dispenser after disinfection phase**

Depending on the machine version, controls are freely programmable, i.e. clients are able to customise programmes to suit individual requirements. Modifications to disinfection programmes can have significant impact on the hygienic reprocessing of laundry. Hence all claims relating to proper hygiene and disinfection relate solely to genuine Miele wash programmes.

Alongside technical specifications, reliable hygiene also requires that the following is ensured by the operator or the machine's owner:

When chemo-thermal processes are used:

- **Observance of instructions and information contained in washing machine operating instructions**
- **Use of detergent suitable for disinfection**
- **Compliance with instructions issued by detergent manufacturers, in particular relating to load-to-liquor ratios, in order to ensure the correct amount of detergent is dispensed**

Chemo-thermal disinfection programmes are set to a load-to-liquor ratio of approx. 1:5 for a nominal load with average absorbency. A load-to-liquor ratio of approx. 1:4 to 1:5 applies to thermal disinfection programmes.

The 'Load-to-liquor ratio' programming mode can be selected with accuracy and automatically in combination with the weighing system as an optional extra and a flowmeter to achieve other load-to-liquor ratios for each load size and laundry type.

When thermal processes are used:

- **Observance of instructions and information contained in washing machine operating instructions**

Please note the enclosed excerpts from the operating instructions of Miele machines.



Matthias Reich, Head of Laboratories and Testing, Werk Lehrte
Miele & Cie. KG, Carl-Miele-Straße 29, D-33332 Gütersloh

- Validity: 3 years
- Authors: M. Röhl and J. Sielmann
- Source: Miele & Cie. KG
- Validity: Until 01.03.2027

Enclosure:

Disinfection – General Information

What does the term disinfection mean?

Deactivation and reduction in number of pathogens transmitting diseases to such an extent that the transmission of diseases and infection is no longer to be anticipated.

Thermal disinfection

Thermal disinfection is carried out by the action of a defined temperature over a certain holding time. In the list, according to § 18 of the German infection control legislation, this is 90°C over 10 min or 85°C over 15 min. With a load-to-liquor ratio of 1 – 4 to 1 – 5 with the activity range AB (see 'Disinfection process according to areas of impact'). Thermal disinfection is independent of the detergent used, which does not have to be classified.

Chemo-thermal disinfection

Chemo-thermal disinfection differs from thermal disinfection in terms of a lower liquor temperature during the disinfection phase. Compensation for the low temperature is ensured by the correspondingly listed washing and disinfecting components.

It is important that these products are used exactly according to the listings. The liquor temperature, the load-to-liquor ratio and the time of dispensing must be strictly adhered to.

For disinfection wash programmes, there are two lists in which the necessary process parameters with regard to cleaning agents and disinfectants are listed.

RKI list (Robert Koch Institute)

Describes procedures for disinfection according to § 18 Infection Protection Act. These processes are only required when a health authority prescribes the use of disinfection in the event of the outbreak of an epidemic relating to a notifiable, transferable disease where there is a risk of items being contaminated. The RKI lists thermal disinfection processes as well as chemo-thermal methods.

Disinfection process according to areas of impact

Disinfection procedures differ according to the relevant areas of impact A, B and C.

- **Area of impact A:**
Suitable for the destruction of vegetative bacteria, including mycobacteria, fungus and fungal spores.
- **Area of impact B:**
Suitable for deactivating viruses.
- **Area of impact C:**
Suitable for deactivating anthrax spores.
In the event of officially directed disinfection, the first wash liquor may not be discharged until after disinfection has been carried out.

Enclosure:

VAH list

VAH = Association for Applied Hygiene (previously DGHM = German Society for Hygiene and Microbiology)

The VAH list describes the procedures required for routine prophylactic disinfection, and in particular for the prevention of infection in hospitals, doctors' surgeries, public areas and other areas where there may be the risk of infection spreading.

With respect to prescribed disinfection, § 18 of the Infection Protection Act is invoked.

Special validated procedures and machines are to be used for surgical textiles as medical products. The procedures and machines listed here are not medical products.

Avoidance of contamination or recontamination

- Disinfect your hands before using the machine.
- Use clean / disinfected transport containers.
- Dispense washing and disinfecting agents in accordance with instructions.
- Observe regulations regarding the wearing of protective clothing.
- Ensure that water is bacteria-free when using a supply from water treatment units.
- Clean detergent drawer, detergent compartments and siphons before use.

Cleaning dispensing drawers and siphons

The detergent drawer is subject to constant moisture. It needs to be cleaned regularly to prevent the build-up of water-borne bacteria.

- Clean the detergent drawer, detergent compartments and siphon thoroughly with hot water as required to remove detergent residues and encrustations.

It is the operator's responsibility to ensure that the standard of disinfection in thermal as well as chemo-thermal procedures is maintained (in accordance with local and national health and safety regulations) by carrying out suitable validation tests. The procedures should be checked at regular intervals, thermoelectrically by means of loggers or bacteriologically using bio-indicators. The supervisor must pay particular attention to observing the process parameters of temperature and, in the case of chemo-thermal programmes, the concentration. Disinfection programmes must not be interrupted as this can have a limiting effect on the disinfection result.