



Zdravotní ústav se sídlem v Ostravě
Partyzánské náměstí 2633/7
Moravská Ostrava, 702 00 Ostrava
Centrum hygienických laboratoří

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Wilo CS, s.r.o.
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RESULTING EVALUATION OF OBJECT COMING INTO DIRECT CONTACT WITH HOT WATER

In accordance with Section 5 of Act No. 258/2000 Coll., on public health protection, as amended, you have requested a health assessment of the product: **Wilo Star-Z NOVA pump, modification according to accessories Star-Z NOVA A, Star-Z NOVA C, Star-Z NOVA T**, manufacturer **Wilo SE, Wilopark 1, 44263 Dortmund, Germany**.

The circulation pump in question is used for water circulation in industry, technical equipment of buildings and is used for short-term contact with hot water. The modified series Star-Z NOVA A, Star-Z NOVA C, Star-Z NOVA T differ only in the accessories that do not come into contact with potable water, they do not differ in manufacturer, material or chemical composition.

It is composed of the following materials:

- Pump casing – brass CuZn40Pb2-C
- Impeller – Noryl PPO-GF 30
- Shaft – ceramic Al₂O₃
- Bearings – graphite with 3% resin impregnation
- Bearing cartridge – stainless steel 1.4301+1.4404+1.4307

Submitted documentation:

- Sample application with product name, manufacturer and material composition dated: 15/ 04/ 2021.
- Technical data sheet for Wilo Star-Z NOVA.
- Material data sheet for Wilo Star-Z NOVA.
- Declaration of conformity - identical chemical and material composition of the product series types.
- Specimen for extraction tests.

The specimen was subjected to extraction tests pursuant to Ministry of Health, Decree No. 409/2005 Coll. as amended, on hygiene requirements for products coming into direct contact with water and for water treatment, Annex No. 1.

The evaluation of the extraction tests stems from the Decree of the Ministry of Health No. 409/2005 Coll. as amended, on hygiene requirements for products coming into direct contact with water and for water treatment, which stipulates that product intended to come into contact with water must meet the limits of extraction tests carried out under the conditions and according to the procedures set out in Annex No. 1 to the Decree mentioned above.

The proportion of water contamination caused by a product in direct contact with water that is intended for short-term contact with drinking water determined by the extraction test may reach no more than the hygiene limit for the drinking water indicator observed, as stipulated in Decree of the Ministry of Health No. 252/2004 Coll., laying down the hygiene requirements for drinking and hot water and the frequency and scope of drinking water control. For the indicators of colour, smell and taste, the hygiene limit set by the above-mentioned Decree of the Ministry of Health No. 252/2004 Coll. must be met. For the purposes of the indicators not listed in Decree of the Ministry of Health No. 252/2004 Coll., the hygiene limits for drinking water are laid down in Article 3(6) of the Decree of the Ministry of Health No. 409/2005 Coll.

Extraction test results:

The specimen was subjected to extraction tests pursuant to Ministry of Health Decree No. 409/2005 Coll., Annex No. 1. In the presented specimen, the material was tested in direct contact with water; physical, chemical and organoleptic parameters were determined in dependence on the characteristics, material composition and purpose of use.

The results are presented in Protocol No. 30840/2021 issued on 30/ 06/ 2021, by the Institute of Health based in Ostrava, Brno, Gorkého 6, which forms an integral part hereof. The results of the laboratory analyses show the following:

1. The resulting mean concentrations of $K^{60}_{24,3}$ antimony, tin, chromium and manganese are below the respective limits of determination of the methods used.
2. The calculated modified concentrations of the migrated component $C^{60}_{24,3}$ COD(Mn), TOC, zinc, cadmium, lead, copper and nickel are below the respective limits of determination of the methods used.
3. The pH values meet the requirements of Decree No. 252/2004 Coll., as amended.
4. The resulting value of the taste threshold number (TFN) organoleptic indicator meet the permitted value laid down in Decree No. 252/2004 Coll., as amended. The organoleptic properties are not affected by the test specimen.

Based on the evaluation of the extraction test results stemming from the requirements of the Decree, it can be concluded that the product: **Wilo Star-Z NOVA pump, modification according to accessories Star-Z NOVA A, Star-Z NOVA C, Star-Z NOVA T, manufacturer Wilo SE, Wilopark 1, 44263 Dortmund, Germany**

meet

the requirements for products intended for direct and short-term contact with hot water according to Decree of the Ministry of Health No. 409/2005 Coll., as amended, on hygiene requirements for products coming into direct contact with potable water and for water treatment.

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Deputy Head of the Department of Inorganic Analyses

Note: Please note that our statement only applies to the submitted **Wilo Star-Z NOVA pump, modification according to accessories Star-Z NOVA A, Star-Z NOVA C, Star-Z Nova T, manufacturer Wilo SE, Wilopark 1, 44263 Dortmund, Germany**, and the conclusions drawn from this testing can only be applied to other products of the same type if their composition and properties fully correspond to the specimen tested by us. For use in direct and short-term contact with hot water, the above conclusion can only be applied if a product of the above dimensions is used in a distribution system connected to a health-safe pipelines of at least 5 m in length.

Annexes: Accredited Protocol No. 30840/2021 issued by the Public Health Institute in Ostrava, workplace in Brno, Gorkého 6, dated 30/06/2021

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