

Statement – PFAS Restriction Proposal

For over 75 years, WIKAL has been a renowned partner and competent specialist for any task in the field of measurement technology. With steadily growing efficiency, innovative technologies are applied when developing new products and system solutions. The reliability of the products and the readiness to face all challenges of the market have been the key factors for WIKAL achieving a leading position in the global market.

Within the WIKAL Group, currently over 10,200 employees are dedicated to maintain and improve technology in pressure, temperature, force and level measurement, and also in the fields of flow measurement, calibration, SF6 gas solutions and service.

Sustainable corporate management has been firmly anchored in WIKAL since its founding 75 years ago. As is usual in family businesses, we think in terms of generations rather than quarters. Our corporate guidelines define our social responsibility, as well as our responsibility towards the environment.

Comprehensive energy-saving and the associated environmental protection are, alongside the high quality of the products and efficient occupational health and safety, equally important goals in the company. Here, WIKAL complies with prevailing national and international environmental laws and regulations.

“We are committed to our social responsibility, secure jobs and a clean environment.”

1. General Information

- ~75% of WIKAL products are affected
- Measurement technology is relevant in all areas
 - in industry (almost) every process (every customer sector) has to be measured
- Important markets
 - Semiconductor manufacturing
 - Hydrogen
 - Mechanical engineering
 - Renewable energies
 - Water and Food
- Products run 24/7, every day
- Safety-relevant components (monitoring function, subject to approval)
- Long development times 2-7 years

2. Identified PFAS Uses

1. Process transmitter

Process transmitters are suitable for many industrial measuring requirements in the widest variety of applications. They monitor pumps, detect the level in vessels or calculate quantities for flow measurement in pipelines.



UPT-20 process transmitter
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PFAS substance/substance group:

- PTFE

PFAS-containing material/component:

- pressure-equalisation membrane

Reason for PFAS Use/ Requirements Profile:

- Relative pressure measurement is only possible if the measuring cell is ventilated
- Permeability ensured via PTFE membrane
- Membrane protects against moisture and dust (high IP protection)
- If measuring device is hermetically sealed → no relative pressure measurement possible

Industry:

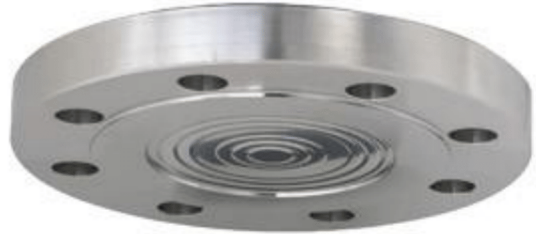
- Food production
- Water supply
- Various locations in the process

Effect of PFAS restriction:

- Relative pressure measurement does not work without ventilation (membrane)
- Moisture and dirt can penetrate inside the product and destroy it
- No safe process possible

2. Diaphragm Seal

By using diaphragm seals, pressure measuring instruments can be adapted to even the most difficult of conditions within process industries. A diaphragm made of the appropriate material separates the medium from the measuring instrument.



Diaphragm seal Model 990.27
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PFAS substance/substance group:

- PFA, PTFE

PFAS-containing material/component:

- Lining of the diaphragm seal

Reason for PFAS Use/ Requirements Profile:

- Diaphragm seals ensure reliable measurement results, e.g. when critical media are involved (acids, media with high temperatures, etc.)
- The pressure is transmitted in the diaphragm seal system and thus the medium is separated from the measuring device

Industries:

- Hygienic applications (food, pharmaceuticals, ...)
- Application according to substances (suitable for viscous substances such as oil, diesel, ...)

Effect of PFAS restriction:

- Certain substances (acids, etc.) /conditions (heat, etc.) attack the material of the measuring device
- Diaphragm seal systems that are not protected by PTFE can be a source of danger due to destruction by aggressive media
- For hydrofluoric acid, for example, no other material currently known
- Adhesions of viscous media can disturb the measurement and thus the entire process

3. Various devices



S-11 pressure sensor

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PFAS substance/substance group:

- FKM, FVMQ

PFAS-containing material/component:

- Sealings

Reason for PFAS Use/ Requirements Profile:

- Seals are essential for the functioning of the products, as they provide the barrier to the environment
- FKM and FVMQ are universally applicable for many different substances (Oils, lubricants, fuels, ...)
- FVMQ has unique low temperature properties

Industries:

- Hydrogen applications
- Renewable energies (wind turbines)
- Hydraulics (construction machinery, etc.)

Effect with PFAS restriction:

- No safe processes (Risk of confusion / high effort if there is a seal for each medium)
- Possible consequences: Leakage (release of oils or fuels into the environment), damage or failure of entire systems
- Extremely long development/modification time (searching for new materials, testing, approval)

3.1 Other product uses

- Other uses are already known
 - Cable
 - connectors
 - Batteries
 - Lacquers
- Other uses can only be assumed, as no more precise information is provided by the manufacturer/supplier (formulation secrecy, no obligation to pass on information, supplier not always manufacturer)
 - High-tech plastics with flame retardants/anti-dripping agents
- Furthermore, there are also many PFAS in the auxiliary and operating materials in the production process
 - Lubricants
 - Production equipment (cables, connectors, batteries, measuring instruments, automation, ...)
 - Cleaning agents

3. Requirements profile

- Long product life
- Temperature resistance
- Dielectric strength
- Flame retardancy
- Standards, certification/approvals, market/customer requirements
- Harsh environmental conditions, not only individually but also in combination
 - Aggressive media
 - High/low temperatures
 - High pressures
 - Friction
 - UV radiation
 - Wind and weather

4. Substitution

- Currently no universal substitutes available
- For some materials (e.g. hydrofluoric acid) only PTFE possible
- Development time: ~2 to 7 Years (when substitutes available) per product
- Extremely high costs
- Important measuring devices could not be applicable on the market anymore

5. Safe Use: Prevention and Reduction of Emissions and Exposure

- No hazards for workers
- Long life cycle of products and no emissions during use phase
- B2B market: waste management in EU is very well regulated
- At the end of the use phase: products do not end up in household waste
- Mainly use of the fluoropolymers (polymers of low concern)
- High material efficiency (see membrane in diaphragm seal: minimum use of material means maximum benefit in functionality)

6. Socio-economic impact – consequences of the proposed restriction

- Processes need reliable materials (e.g. drinking water, food, pharma) for safe functioning
- Product quality and performance would be worse than with PFAS
- In many cases no substitutes known (e.g. pressure-equalisation membrane)
 - ➔ products cannot be manufactured
- If substitutes are available and changes are possible: high approval times and costs
 - Approval bodies already overloaded

- **PFAS are essential for the safe functioning of the products**
- **Products also relevant for future technologies and key industries (Hydrogen, renewable energies, medical technology, ...)**
 - These important industries could no longer be supplied
 - Conflict with the European Green Deal
- **The extremely high costs endanger Europe as a business location internationally as well as our local location in Bavaria/Germany and other European countries**
 - WIKA as an important employer