

## Certificate of Conformity for Fernox water treatment products: Protectors, Antifreezes, Cleaners and other heating system chemical products.

### Technical statement of conformance for:

- Fernox Protectors: F1, F9
- Fernox Antifreezes: Alphi-11, HP-5/c, HP-15/c, HP-EG, Solar S1
- Fernox Cleaners: F3, F8, DS-3, DS-10, DS40
- Fernox Boiler Noise Silencer F2 and Leak Sealer F4
- Fernox Biocides F7, F7+
- Fernox Plumbing Consumables: Powerflow Flux, Hawk White, Water Hawk, LS-X

Fernox hereby confirms the safe use of the above mentioned products for use in residential and commercial heating systems, provided they are used according to their instructions for use. Fernox chemical products can safely be used in all water based heating systems containing any of the following materials of construction: stainless steels, mild steels, malleable iron, copper, brass, soft and hard soldered joints, and aluminium.

To ensure corrosion protection for all the above mentioned materials, Fernox products are formulated to achieve a near-neutral pH range when dosed using the recommended working concentration. Fernox chemicals are compatible with all other Fernox products, however compatibility with other chemicals cannot be guaranteed.

In addition, Fernox products are used to ensure compliance with UK Building regulations (Approved Document L), BS 7593:2019 and guidance documents such as BSRIA's BG 29 and BG 50, relating to water treatment of domestic and commercial heating systems.

Furthermore, provided that the fill water is derived from potable quality water, i.e. without corrosion causing contaminants such as high chlorides or sulphates, and that the system is maintained with an oxygen concentration in line with VDI 2035 Part 1, Fernox confirms its products fulfil the requirements of VDI 2035 Part 1 for corrosion prevention and scale reduction relating to the use of water treatment chemicals.

### The benefits of using Fernox Protectors are as follows:

#### Fernox Protector F1, F9, Alphi-11, HP-5/c, HP-15/c, HP-EG, Solar S1

Fernox corrosion inhibitors (Protectors) give long-term protection of Residential, Commercial and Renewable heating systems against internal corrosion and scale formation. The products minimise corrosion of stainless steels, mild steels, malleable iron, copper, brass, soft and hard soldered joints and aluminium. Fernox Protectors have been manufactured for nearly 60 years and have been used to treat millions of heating systems.

They are suitable for all types of boilers, heat pumps, radiators and pipework systems containing any of the aforementioned materials. The efficacy of all Fernox Protectors (Protector F1, Protector + Filter Fluid F9 and Anti-freeze Protector Alphi-11) is confirmed by compliance with the NSF Chemical Inhibitor Assessment Scheme (CIAS). Listings can be verified on the NSF website: [www.nsfpams.com/listings/#/cias](http://www.nsfpams.com/listings/#/cias). Additionally all Fernox Inhibitors, including The HP Heat Transfer fluid range pass BS 9393.

Compliance with NSF CIAS (previously BuildCert) is independently validated and is recommended in the United Kingdom Building Regulations, Part L, for residential heating systems.

The NSF CIAS assesses the ability of chemical inhibitors for use in residential hot water central heating systems to restrict the formation of limescale, reduce metallic corrosion and ensure compatibility with non-metallic components typically found within central heating systems. Fernox corrosion inhibitors are formulated not to just meet the CIAS specification but to exceed considerably the performance standards required.

### Why use a Fernox Protector?

- To avoid system breakdowns and inefficiencies caused by sludge, dirt and debris by providing long lasting protection against corrosion and scale in mixed metal central heating systems.
- To save energy. For residential systems, results show that Fernox Protector F1 when used in conjunction with Fernox Cleaner F3 can achieve 15% gas savings each time a room is heated.
- To avoid the build-up of gas which can result in the frequent need to vent radiators.
- To prevent sticking pumps and boiler noise caused by corrosion.
- To reduce maintenance costs and save on fuel bills.
- To prevent cold spots in radiators by avoiding gas and magnetite build-up.

All Fernox Protector products are non-toxic.

### Fernox Protector+ Filter Fluid F9

#### Why use Fernox Protector+ Filter Fluid F9?

- Fernox Protector+ Filter Fluid F9 is an enhanced corrosion inhibitor containing a dispersant package specifically designed to be used in conjunction with a system filter such as one from the Fernox TF1 filter range.
- Fernox Protector+ Filter Fluid F9 is a unique formulation designed to prevent corrosion, scale and sludge formation in a mixed metal heating system.
- As well as offering all of the attributes and benefits of the market-leading Protector F1, the added dispersant effectively lifts debris contained in a lightly-contaminated system and delivers it to a filter for safe removal.
- The product maximises the debris removal process by delivering circulating system contaminants to the filter. It increases a filter's effectiveness to protect vulnerable and vital components and extend system longevity.

- Fernox Protector+ Filter Fluid F9 is ideal for use in lightly-sludged central heating systems. Where the system has previously been cleaned and treated but where inhibitor levels have not been maintained and further limited corrosion has subsequently taken place.
- Additionally, it is recommended in central heating systems with inherent design issues or low flow rates, as small amounts of sludge may remain in dead leg areas even after cleaning.
- Similarly, in systems where water drain down or system shut down is not practical or possible, the use of Fernox Protector+ Filter Fluid F9 and a Fernox TF1 in-line filter is an ideal solution.

### Fernox Cleaners: F3, F8, DS-3, DS-10, DS40

Fernox Cleaners remove sludge, loosen scale and installation debris from new and existing central heating systems to restore and maintain energy efficiency.

They are neutral universal cleaners ideal for pre-commissioning new systems in accordance with BS 7593:2019. However, please note, Fernox Cleaner products must always be removed to ensure all the dirt and debris is removed from the system. Once removed, a Fernox Protector should be added to protect the system from future corrosion.

#### Why use a Fernox Cleaner? (F3, F8, DS-3, DS-10, DS40)

- To remove sludge, loosen scale and other debris to restore heating efficiency of existing systems.
- Fernox products are compatible with materials commonly used in heating systems: stainless steels, mild steels, malleable iron, copper, brass, soft and hard soldered joints and aluminium.
- They are easy to use and the system can be left running normally during cleaning.
- They are suitable for use with all known residential powerflushing machines.
- They comprise a neutral, non-toxic formula.

*For residential systems, results show that when used with Fernox Protector F1, gas savings of up to 15% can be achieved every time you heat up your room.*

### Fernox DS40 Descaler & Cleaner

Fernox DS40 Descaler & Cleaner is an acidic cleaner which can be used as a fast-acting remover of limescale, black sludge (magnetite) and other deposits from boilers and central heating systems. This product is designed for use with powerflushing units for more efficient, rapid cleaning. It can also be used separately to descale a boiler.

#### Why use Fernox DS40 Descaler & Cleaner?

- To rapidly remove limescale, black sludge and other deposits.
- Restore circulation and improve heating efficiency.
- The free-flowing powder is easy to use with powerflushing units or application via an F&E tank or suitable dosing vessel (for sealed systems).

- System water turns yellow when product is exhausted.
- Fernox DS40 Descaler & Cleaner is compatible with mixed metal systems.
- System Neutraliser is included to aid neutralisation before disposal.

### Fernox Boiler Noise Silencer F2 and Leak Sealer F4

#### Why use Fernox Boiler Noise Silencer F2?

- Fernox Boiler Noise Silencer F2 helps to reduce boiler noise and improve heat transfer efficiency.
- It is suitable for all types of boiler, including combination boilers and those containing aluminium components as well as radiators and pipe work heating systems.

#### Why use Fernox Leak Sealer F4?

- Fernox Leak Sealer F4 is used in residential heating systems for sealing small inaccessible leaks. Fernox Leak Sealer F4 works best in warm/hot circulating water.
- Once dispersed evenly in the system water it is effective within 1-24 hours. The sealing efficiency of Fernox Leak Sealer F4 has been formulated and only binds and polymerises to seal small leaks when oxygen is present so does not block safety devices, pumps, etc.

### Fernox Biocide F7, F7+

#### Why use a Fernox Biocide?

- Biocide for the prevention of bacterial contamination in residential heating systems and chilled water systems.
- Prevents the reoccurrence of jelly-like deposits in feed and expansion cisterns.
- To be used in conjunction with Fernox Protectors.
- Fast, effective action.
- Simple application.

Fernox is a licensed member of the Benchmark Scheme which aims to improve the standards of installation and commissioning of residential heating and hot water systems in the United Kingdom and to encourage regular servicing to optimise safety, efficiency and performance.

Installers are required to carry out installation, commissioning and servicing work in accordance with the Benchmark Code of Practice which is available from the Heating and Hotwater Industry Council (HHIC) who manage and promote the scheme.

Visit [www.centralheating.co.uk](http://www.centralheating.co.uk) for more information.

