

## Sentinel X100 Rapid-Dose®

### Leave-in protection against corrosion and limescale

To provide protection against corrosion and limescale, major boiler manufacturers recommend that once cleaned, central heating systems should be dosed with Sentinel X100 Inhibitor. For pressurised systems, the ideal method of dosing is by using Rapid-Dose.

- **Unique anti-corrosion formulation with multiple heavy duty inhibitors**

Protects all common system metals against corrosion and is particularly effective in protecting aluminium.

- **Intelligent formulation with pH stabilisers**

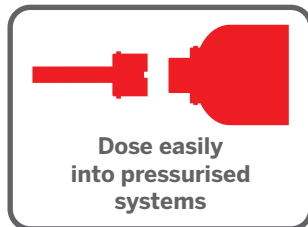
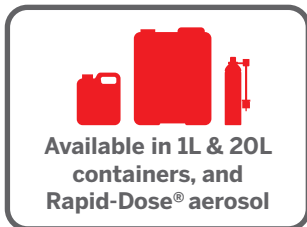
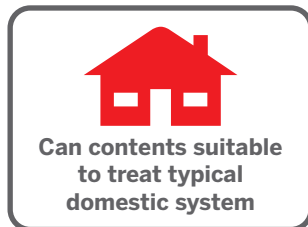
Prevents swings in pH which can cause and accelerate corrosion of high value components such as heat exchangers and radiators.

- **Multiple limescale inhibitors**

Protects high value components such as heat exchangers against limescale formation.

- **Dose in 30 seconds into pressurised systems**

Suited to service environment and emergency applications.



### The Sentinel System

Lifetime protection for heating, cooling and hot water systems using the best practice process of...



**CLEAN**  
WITH  
APPROPRIATE  
CLEANER



**PROTECT**  
WITH X100  
INHIBITOR



**MAINTAIN**  
WITH  
TEST KIT

## Application

Sentinel X100 has been formulated as a multipurpose treatment to inhibit corrosion, scale, boiler noise and hydrogen gassing in all types of indirect heating systems including those containing aluminium components. Sentinel X100 is suitable for use in all waters, both hard and soft. The formulation is non-toxic and inherently biodegradable.

## Dosing

One 300ml can of Sentinel X100 is sufficient to treat a typical domestic system of 8 to 10 radiator panels (i.e. 100L system). Larger systems should be dosed with 2 cans. The product can be applied via the filling loop stop valve or radiator. The system should be less than 2.3 bar when the product is applied. Never attempt to dose into a hot system. For best results, systems should be cleaned and flushed in accordance with BS7593; new systems and those up to 6 months old with Sentinel X300, existing systems with Sentinel X400 or Sentinel X800. If the system is already noisy due to limescale deposits in the heat exchanger, Sentinel X200 should be added together with Sentinel X100.

## Physical properties

|                          |                                   |
|--------------------------|-----------------------------------|
| <b>Appearance:</b>       | Clear pale yellow to amber liquid |
| <b>Specific gravity:</b> | 1.30                              |
| <b>pH (25°C):</b>        | 6.5                               |
| <b>Freezing point:</b>   | -19°C                             |
| <b>Odour:</b>            | Mild                              |

## Safety information

The information provided below enables compliance with the Control of Substances Hazardous to Health Regulations. A full Safety Data Sheet is available upon request.

|                    |   |
|--------------------|---|
| <b>Description</b> | <b>Inhibitor for central heating systems</b><br>An aqueous solution of inorganic and organic corrosion and scale inhibitors.  |
| <b>Handling</b>    | Avoid contact with skin and eyes.<br>Keep out of reach of children and animals.   |
| <b>Storage</b>     | Store in cool, well ventilated area.<br>Pressurised container.<br>Protect from sunlight and do not expose to temperatures exceeding 50°C.<br>Do not pierce or burn, even after use.   |
| <b>Spillage</b>    | Flush spillage with plenty of water and wash to waste.  |
| <b>First aid</b>   | Skin Exposure: Wash immediately with plenty of water.<br>If irritation develops, seek medical attention.<br>Eye Exposure: Flush immediately with plenty of running water.<br>Keep eyelids apart.<br>Seek medical advice.<br>Ingestion: Rinse mouth with water.<br>Do NOT induce vomiting!<br>Seek medical advice. |
| <b>Additional</b>  | Not for use in potable water systems.<br>Not considered hazardous to health.<br>Non-flammable.  |

The use of Sentinel water treatment is endorsed by the industry's major international manufacturing companies\*



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SentinelCPM

## Sentinel Rapid-Dose™ X100

### Inhibitor & Protector for Central Heating Systems

#### Features & Benefits

- Quick & easy product addition to all systems
- No need to draw off water, release system pressure\* or wait for system to cool
- Full discharge in about 30 seconds
- Effectively controls scale and corrosion
- Helps prevent boiler noise
- Helps stop system gassing
- Suitable for all metals including aluminium
- Easy & safe to handle, absolutely no mess
- Concentration is easily checked with a Sentinel Test Kit or a conductivity meter

#### Description and Use

Sentinel Rapid-Dose™ X100 has been formulated as a multipurpose treatment to inhibit corrosion, scale, boiler noise and hydrogen gassing in all types of indirect heating systems including those containing aluminium components.

Sentinel Rapid-Dose™ X100 is suitable for use in all waters, both hard and soft. The formulation is completely non-toxic.

#### Dosing

One aerosol canister of Sentinel Rapid-Dose™ X100 is sufficient to treat a typical domestic system of 8 to 10 radiator panels. Larger systems should be dosed with two canisters. The product should be applied using one of the dedicated dosing connectors (see the Technical Information sheet "Rapid-Dose™ Application Guide").

It is recommended that the system is circulated after addition of product to ensure its complete distribution.

For best results, systems should be cleaned and flushed in accordance with BS7593 using an appropriate system cleaner (e.g. Sentinel Rapid-Dose™ X400).

If the system is already noisy due to limescale deposits in the heat exchanger, Sentinel Rapid-Dose™ X200 should be added together with Sentinel Rapid-Dose™ X100.

#### Physical Properties

- |                     |              |
|---------------------|--------------|
| • Odour:            | Mild         |
| • Specific gravity: | 1.26 (25°C)  |
| • pH (concentrate): | 6.4 (approx) |
| • Freezing point:   | -13°C        |

#### Packaging

- 400ml Aerosol canister

#### Safety Precautions

The contents of the can are under pressure and will discharge when attached to the connector. Ensure that the connector is securely attached to the heating system prior to mating with the can.

Use only on fully indirect heating systems.

\*It is only necessary to release system pressure when it is above 2.3 bar.

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## Sentinel Rapid-Dose™ X100

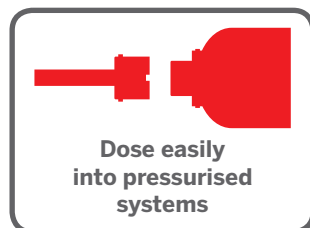
|  |  |
|--|--|
| <b>Inhibitor for Central Heating Systems</b> | An aqueous solution of inorganic and organic corrosion and scale inhibitors.   |
| <b>Health Hazards</b>                        | Not for use in potable water systems.<br>Not considered hazardous to health.   |
| <b>Handling</b>                              | Avoid contact with skin and eyes.<br>Keep out of reach of children and animals.<br>Use only as directed.<br>Contents of the can are under pressure and will discharge when attached to the connector.<br>Ensure that the connector is securely attached to the heating system prior to mating with the can.<br>It is only necessary to release system pressure when it is above 2.3 bar. |
| <b>Storage</b>                               | Store in cool, well ventilated area.<br>Pressurised container. Protect from sunlight and do not expose to temperatures exceeding 50°C.<br>Do not pierce or burn, even after use.   |
| <b>Spillage</b>                              | Flush spillage with plenty of water and wash to waste.   |
| <b>Fire/Explosion Risks</b>                  | Non-flammable  |
| <b>First Aid</b>                             | <b>Skin Exposure :</b><br>Wash immediately with plenty of water.<br>If irritation develops, seek medical attention.<br><br><b>Eye Exposure :</b><br>Flush immediately with plenty of running water.<br>Keep eyelids apart.<br>Seek medical advice.<br><br><b>Ingestion :</b><br>Rinse mouth with water.<br>Seek medical advice.  |

## Sentinel X400 Rapid-Dose®

Thorough cleaner for systems older than six months

To remove built-up magnetite sludge, to restore circulation to radiators and pipework and to prepare for the installation of new components, major boiler manufacturers recommended that older systems should be cleaned with Sentinel X400 High Performance Cleaner. For pressurised systems the ideal method of dosing is by using Rapid-Dose.

- **High cleaning power**  
Restores system circulation and system effectiveness.
- **Long acting formula**  
Holds sludge in suspension for up to approximately 3-4 weeks, ideal for pre-dosing.
- **High performance dispersants**  
Penetrates and lifts stubborn sludge ready for removal from system.
- **Dose in 30 seconds into pressurised systems**  
Ideal for pre-dosing ahead of the job.



### The Sentinel System

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**CLEAN**  
WITH  
APPROPRIATE  
CLEANER



**PROTECT**  
WITH X100  
INHIBITOR



**MAINTAIN**  
WITH  
TEST KIT

## Application

Sentinel X400 Rapid-Dose® has been formulated for the effective cleaning of fouled central heating systems which may contain corrosion debris and other sludge. It is ideal for use where a new boiler or pump is to be fitted to an existing system, or where radiators have cold areas or are partly blocked due to sludge build up. The product is a non-acid formulation which can be used in all types of indirect heating systems including those containing aluminium components.

## Dosing

One can of Sentinel X400 Rapid-Dose is sufficient to clean a typical domestic system of 8 to 10 radiator panels. Larger systems should be dosed with two cans. The product can be applied via the filling loop stop valve or radiator. The system should be less than 2.3 bar when the product is applied. Never attempt to dose into a hot system.

To clean an existing system in accordance with BS7593, Sentinel X400 Rapid-Dose should be circulated, preferably at normal operating temperature, with all valves open and the pump turned to maximum flow for a minimum period of 2 hours or until satisfactory performance is restored. Where systems are badly fouled, a longer period of circulation (approximately 3-4 weeks) is recommended. There is no limit to the time for which the product can safely be left in the system. Flush the system before refilling and dosing with Sentinel X100 Rapid-Dose.

## Physical properties

|                          |                            |
|--------------------------|----------------------------|
| <b>Appearance:</b>       | Slightly hazy brown liquid |
| <b>Specific gravity:</b> | 1.08 (25°C)                |
| <b>pH (concentrate):</b> | 6.2 (approx.)              |
| <b>Freezing point:</b>   | -13°C                      |
| <b>Odour:</b>            | Mild                       |

## Safety precautions

The information provided overleaf enables compliance with the Control of Substances Hazardous to Health Regulations. A full Safety Data Sheet is available upon request.

|                             |   |
|-----------------------------|---|
| <b>Description</b>          | <b>High Performance Cleaner for Central Heating Systems</b><br>An aqueous solution of synthetic organic polymers.   |
| <b>Health hazards</b>       | Not for use in potable water systems. Not considered hazardous to health.   |
| <b>Handling</b>             | Avoid contact with skin and eyes. Keep out of reach of children and animals.  |
| <b>Storage</b>              | Store in cool, well ventilated area. Pressurised container. Protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use.  |
| <b>Spillage</b>             | Flush spillage with plenty of water and wash to waste.  |
| <b>Fire/explosion risks</b> | Non-flammable.  |
| <b>First aid</b>            | Skin Exposure: Wash immediately with plenty of water.<br>If irritation develops, seek medical attention.<br>Eye Exposure: Flush immediately with plenty of running water.<br>Keep eyelids apart.<br>Seek medical advice.<br>Ingestion: Rinse mouth with water.<br>Do NOT induce vomiting!<br>Seek medical advice. |

The use of Sentinel water treatment is endorsed by the industry's major international manufacturing companies\*



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## Sentinel Eliminator Vortex<sup>®</sup>300

Compact filter for powerful magnetic filtration of system debris

Circulating debris in central heating systems can cause wear and premature failure of pumps, valves and heat exchangers. Sentinel Eliminator Vortex300, fitted to the return pipe on the boiler, will protect the system against all types of debris, and is ideal for installation in situations where space is restricted.

- **Compact design combined with in-line installation and 360°rotating T-piece**  
For ease and speed of install on all orientations of pipework
- **Manufactured to automotive standards with robust GRP body, dual seals and quality EU manufactured brass valves**  
10 year guarantee for complete reassurance of long lasting quality
- **Flexible cleaning methods**  
Providing fast and effective flushing on service or simple proof of collection
- **Unique Vortex Core with powerful neodymium magnet assembly**  
Retains more magnetite than other leading small filters. Ensures the filter cannot block and can aid capture of other types of debris

**22mm**  
isolation valves  
available

**Dimensions**  
Height: 205mm  
Width: 76mm

**9,000**  
Gauss  
field

**50 l/m**  
Max. flow rate  
50 litres  
per minute



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**MAINTAIN**  
WITH  
TEST KIT

## Description

Sentinel Eliminator Vortex® system filter removes all types of debris commonly associated with wet central heating systems, affording boiler protection and helping to maintain optimum system operation and efficiency.

## Operation

Sentinel Eliminator Vortex utilises a unique Vortex Core to deliver maximum contact time between circulation debris and powerful neodymium-iron-boron magnets. The Vortex Core reduces water flow rate and turbulence within the unit to enhance debris retention. It also ensures the filter will never block. The collected debris can be simply flushed away by removing the magnet from its sleeve and opening the drain valve at the base of the unit.

## Additional features

**Filter chamber capacity:** 300 ml

**Compact design:** Reduced height for easy installation into restricted spaces

**Cannot block:** Full unit does not affect system

**Tamper-proof:** Drain/flush valve safety feature

**Dosing:** Compatible with Sentinel Rapid-Dose® (300ml)

## Technical specifications

**Maximum temperature:** 100°C

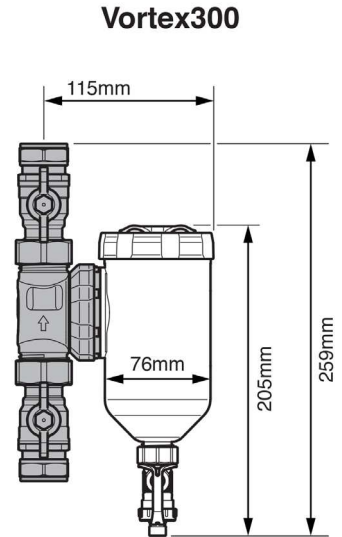
**Maximum operating pressure:** 3 bar

**Maximum flow rate:** 50 litres/min

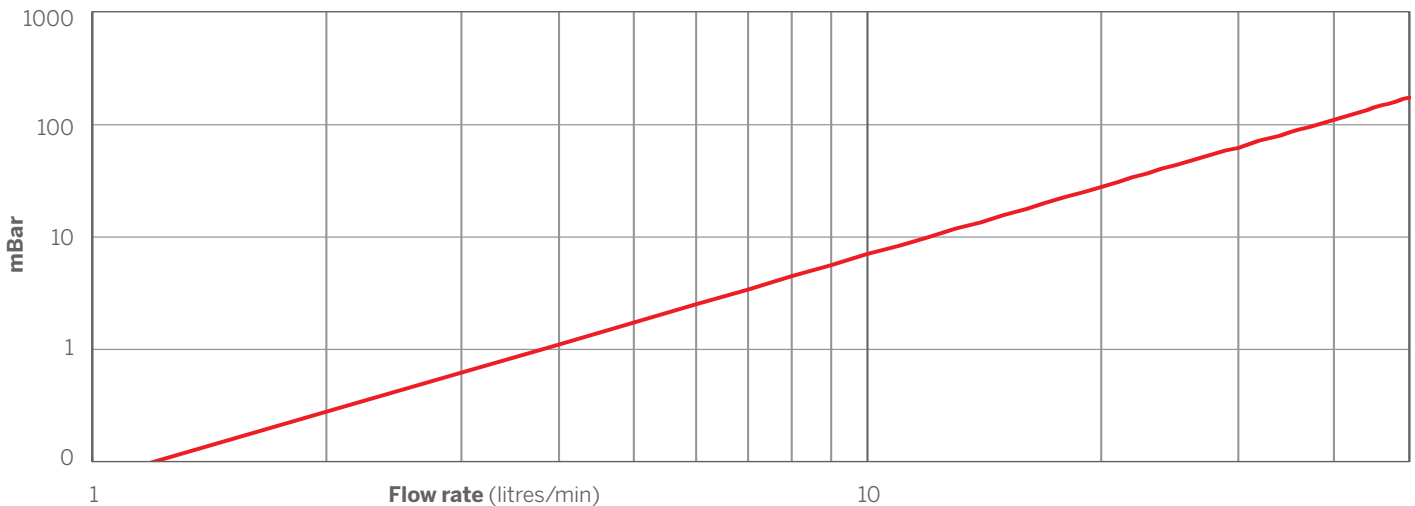
**Mounting:** Main unit upright only  
– flow aligned with directional arrow

**Connectors:** 22 mm compression

**Weight (boxed):** 1.3kg



## Pressure loss chart - Eliminator Vortex300



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## Sentinel Eliminator Vortex<sup>®</sup> 500

Large filter for powerful magnetic filtration of system debris

Circulating debris in central heating systems can cause wear and premature failure of pumps, valves and heat exchangers. Sentinel Eliminator Vortex500, fitted to the return pipe on the boiler, will protect the system against all types of debris.

- **Large debris collection capacity and suitable for high flow rates, combined with in-line installation and 360° rotating T-piece**

Ideal where greater debris collection is required. Install quickly and simply onto pipework of any orientation

- **Flexible cleaning methods**

Providing fast and effective flushing on service or simple proof of collection

- **Manufactured to automotive standards with robust GRP body, dual seals and quality EU manufactured brass valves**

10 year guarantee for complete reassurance of long lasting quality

- **Unique Vortex Core with powerful neodymium magnet assembly**

Exertional retention of circulating system debris. Ensures the filter cannot block and can aid capture of other types of debris

22mm or 28mm isolation valves available

Dimensions  
Height: 228mm  
Width: 88mm

9,000 Gauss field

Max. flow rate  
50 litres per minute



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**CLEAN**  
WITH  
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CLEANER



**PROTECT**  
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INHIBITOR



**MAINTAIN**  
WITH  
TEST KIT

## Description

Sentinel Eliminator Vortex® system filter removes all types of debris commonly associated with wet central heating systems, affording boiler protection and helping to maintain optimum system operation and efficiency.

## Operation

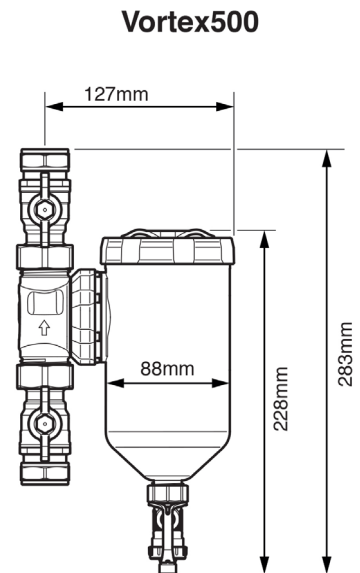
Sentinel Eliminator Vortex utilises a unique Vortex Core to deliver maximum contact time between circulation debris and powerful neodymium-iron-boron magnets. The Vortex Core reduces water flow rate and turbulence within the unit to enhance debris retention. It also ensures the filter will never block. The collected debris can be simply flushed away by removing the magnet from its sleeve and opening the drain valve at the base of the unit.

## Additional features

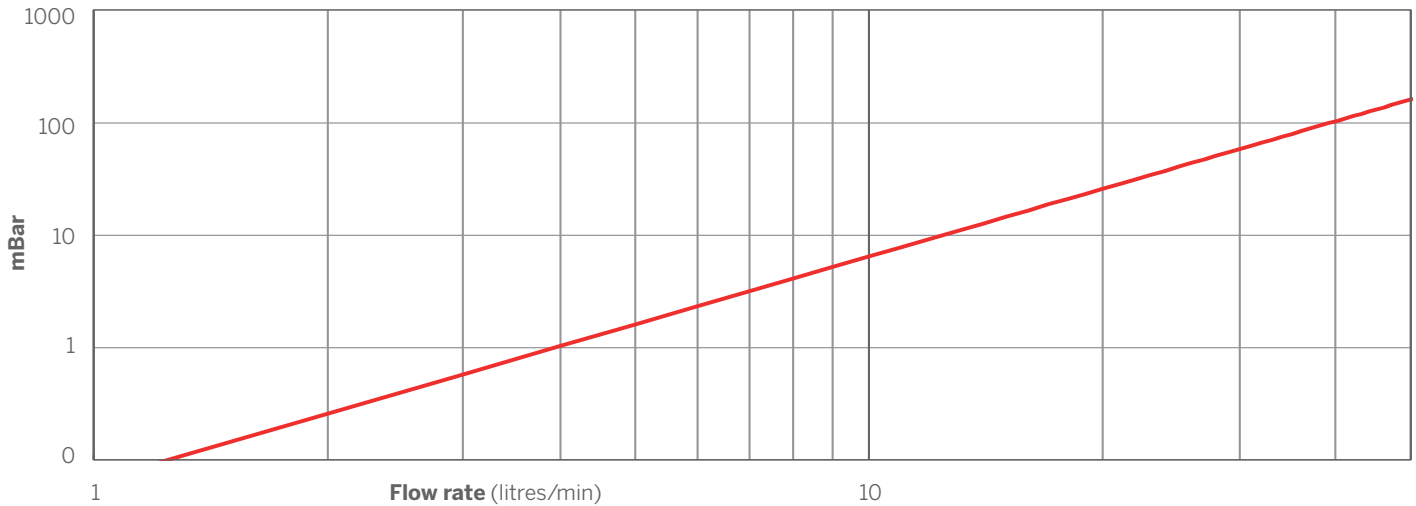
|                                   |  |
|-----------------------------------|--|
| <b>Large collection capacity:</b> | Suitable for use on systems that are larger, dirtier or have considerable circulating debris |
| <b>Cannot block:</b>              | Full unit does not affect system operation   |
| <b>Tamper-proof:</b>              | Drain/flush valve safety feature   |
| <b>High flow:</b>                 | Max. flow rate of 50 litres per minute   |
| <b>Dosing:</b>                    | Compatible with Sentinel Rapid-Dose® (300ml)   |

## Technical specifications

|                                    |   |
|------------------------------------|---|
| <b>Maximum temperature:</b>        | 100°C   |
| <b>Maximum operating pressure:</b> | 3 bar   |
| <b>Maximum flow rate:</b>          | 50 litres/min   |
| <b>Mounting:</b>                   | Main unit upright only<br>- flow aligned with directional arrow |
| <b>Connectors:</b>                 | 22mm and 28mm   |
| <b>Weight (boxed):</b>             | 1.5kg (22mm); 1.6kg (28mm)                                      |



## Pressure loss chart - Eliminator Vortex500



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