



ESSENTIAL FOR ENERGY SAVINGS

Central Heating Products

for Specifiers, Consultants, Local Authorities, Government Schemes & installers

UNIQUE TREATMENT IN AS LITTLE AS 5 MINS



PROTECT AND PRESERVE FOR LESS

Calmag - Water Treatment Excellence

At Calmag, our water treatment experts are specialists in the development and manufacture of the most **diverse range of water treatment solutions**.

Founded in 2002, Calmag is the only independently owned UK manufacturer to produce a complete range of products and services to meet the needs of both domestic and commercial customers. Our continuous investment in stringent design, production and testing programmes are your assurance of great quality, **reliable performance and best value**, all backed by long Calmag guarantees, technical support and after sales care.

Calmag domestic products offer the widest choice of home water solutions to deliver the quality of water you want, with the added benefits of reduced energy usage and significant savings on household bills and maintenance costs. Calmag Commercial specialists design products to exacting project specifications, resulting in the most **effective and efficient solutions** to meet heavy industrial demands.

Our work with industry partners and trade associations reflects our total commitment to supporting best practice and the continual development of water treatment excellence. Professional installers have confidence in Calmag, with products that give **optimum performance combined with ease of installation**. Our many customers include some of the world's largest plumbers' merchant chains, UK independent merchants, and public sector organisations.

We're always here to help

If you have any queries or require advice on any of our products, please give us a call on our Helpline. You can always rely on us for **technical support** and after-sales care.

CHARLES WYSOCKI
MANAGING DIRECTOR
CALMAG

For more information or advice
call our helpline on **01535 210320**
or visit **www.calmagltd.com**

Products that are tried, tested & approved

Calmag is one of the largest independent manufacturers of water conditioning products in Europe, offering solutions to practically every water-related need for the home and industry.

The Calmag product range includes **scale inhibitors, water softeners, water filters, ultra violet disinfection, reverse osmosis, pH correction, nitrate removal, iron removal, water chillers, calcium treatment, chemical inhibitors and cleaners**.



SCALE INHIBITORS

ACID NEUTRALISER

MAGNETITE REMOVAL

Two recommended products to meet your needs

Introducing the Calmag inhibitor range, two products that have recently gained **BuildCert approval** and **Energy Saving Trust Recommended** status and can now help your business to save time and money compared to comparable competitor products. The unique formulation and delivery system mean that treatment is faster, more efficient and, therefore, more cost-effective.

1. NEW CM100 Inhibitor

CM100 is a very effective, proven triple blend of corrosion inhibitors suitable for all metals in the system.

2. NEW CalShot Inhibitor

A special reagent formula that's extremely effective on sludge, limescale, flux and other debris combined with Calmag's unique fast delivery system.

**PROTECT
AND
PRESERVE
FOR LESS**

POWERFLUSHING

**UNIQUE
TREATMENT
IN AS LITTLE AS
5 MINS**



Energy Savings

The need for effective water treatment

There are an estimated 17 million gas boilers in the UK, with around **1.5 million new boilers installed each year**. Following the Government's decision to require virtually all new boilers to be SEDBUK A rated boilers following the changes to Part L of the Building Regulations, rise has been given to areas of water treatment that need to be addressed which followed with the Domestic Heating Compliance Guide.

Water treatment fulfils a number of rolls within domestic central heating systems and is used to minimise the corrosion of metals within the system, to inhibit the formation of the scale and sludge, to inhibit the growth of microbiological organisms and to maintain or restore the energy efficiency of the system.

More efficient heating systems

Boiler noise, pump failure and cold spots are problems that can be rectified by correct treatment and cleaning. Dirty central heating systems can **increase fuel bills by up to 35%** - something that homeowners will be keen to remedy.

Powerflushing is the most efficient way to pre-commission a new installation or clean an existing system. By flushing with mains water alone, around **10% of the debris in a system is removed**. This can be increased by **up to 30%** by adding a powerflushing unit to the process.

This is backed up by the Energy Saving Trust recommended scheme.

Increasing the effectiveness of flushing

To increase this figure even further, you can combine powerflushing with the use of chemicals such as cleansers, sludge, flux, silt and descaling chemicals, which will **remove up to 80% of the contaminants present**.

The Building Regulations state that during the final filling of the system, a chemical water treatment formulation should be added to the primary circuit to control corrosion and the formation of scale and sludge. Added to this, boiler manufacturers are increasingly reluctant to honour warranty repairs where they suspect that the problem has been caused or exacerbated by debris or sludge in the system.

Independent research carried out by GasTec has confirmed that sludge build up in radiators on a normal domestic heating system can **reduce their overall effectiveness by as much as 15%**. In addition, it says that proper cleansing of a system using a chemical additive to "break up" sludge deposits, combined with a powerflush of the system, will result in a greater uniformity of radiator temperature and result in a reduced risk of system imbalance.

Water Treatment

Water treatment fulfils a number of roles within domestic central heating systems which can be summarised as follows:

- ✓ **To minimise the corrosion of metals within the system.**
- ✓ **To inhibit the formation of limescale.**
- ✓ **To inhibit the formation of the scale and sludge.**
- ✓ **To inhibit the growth of microbiological organisms.**
- ✓ **To maintain or restore the energy efficiency of the system through a combination of the above effects.**
- ✓ **To neutralise and dispose acidic waste safely, without damaging the environment.**

These are consistent with the requirements of British Standard, which is a referenced document within the current Building Regulations, and following this Code will guarantee compliance.

The current problem

In most cases, the quality of the water supplied to the home is determined by local conditions. There is no practical method of external treatment at the water works, which can reduce the potential for corrosion and scale within a home.

To minimise the likelihood of corrosion, scale, sludge, acidic waste and microbiological contamination, and to help us maintain the energy efficiency of the heating system, the water must be treated with the use of various products.

Extract taken from the Domestic Building Services Compliance Guide

4.0

System Preparation and water treatment



New Systems

- Central heating systems should be thoroughly cleaned and flushed out before installing a new boiler.
- During final filling of the system, a chemical water treatment inhibitor meeting the manufacturer's specification or other appropriate standard should be added to the primary circuit to control corrosion and the formation of scale and sludge.
- Installers should also refer to the boiler manufacturer's installation instructions for appropriate treatment products and special requirements for individual boiler models.
- Where the mains total water hardness exceeds 200 parts per million, and if required by the manufacturer, provision should be made to treat the feed water to water heaters and the hot water circuit of combination boilers to reduce the rate of accumulation of limescale.

Supplementary info

Inhibitors should as a minimum be BuildCert approved.

Limescale can be controlled by the use of chemical limescale inhibitors, combined corrosion and limescale inhibitors, polyphosphate dosing, electrolytic scale reducers or water softeners.

For more information or advice call our helpline on **01535 210320** or visit **www.calmagltd.com**

CalShot and CM100

Approved by BuildCert and Energy Saving Trust Recommended

Both **CalShot** and **CM100** have a **special reagent formula** which works on reaction to sludge, limescale, flux and other debris through their combination of chemicals. They are safe and effective to use in all heating systems and, as such, are **BuildCert approved** and **Energy Saving Trust Recommended**.



The Energy Saving Trust Recommended

Only the most energy efficient products carry the Energy Saving Trust Recommended logo. The label makes it quick and easy for you to identify products that have met the strictest criteria on energy performance - and you have the assurance that they are recommended by an independent and trusted body. **These products will use less energy, contribute towards savings on your energy bills and help save the environment.**

So, you can rest assured that where there's a logo there's a smarter choice.

Remember to look for the logo when you are buying a new product. For more information visit www.energysavingtrust.org.uk/recommended.



CalShot and CM100 are both BuildCert approved

To ensure that chemical inhibitors meet a satisfactory performance requirement the manufacturers, BuildCert and laboratories developed the CIAS Industry Specification for the performance of Chemical Inhibitors for Use in Domestic Hot Water Central Heating Systems.

The Specification was first published in February 2006 and is now being used as a benchmark for chemical inhibitor manufacturers as a basis for developing chemical inhibitors and by BuildCert to offer third party Certification.

Equipment manufacturers, installers and end users can now be sure that BuildCert approved chemical inhibitors will provide an effective resistance to corrosion within a heating system when correctly used.

Chemical inhibitors are tested in BuildCert approved laboratories who test the inhibitor against the exacting requirements of the BuildCert Domestic Water Treatment Approval Scheme (CIAS) Specification for the performance of Chemical Inhibitors for Use in Domestic Hot Water Central Heating Systems.

To ensure that BuildCert Certified products are suitable for use, manufacturers are audited to verify that the contents of every bottle of product supplied are identical to the samples tested.

Manufacturers are then audited to ensure that every bottle of the product supplied is the same as the samples tested, ensuring that all BuildCert Certified products will be suitable for use.



For more information or advice
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or visit www.calmagltd.com

CalShot Inhibitor

The unique **new** squeezable applicator

CalShot has a **special reagent formula** which works on reaction to sludge, limescale, flux and other debris through its combination of chemicals.



This fast reacting liquid is water-soluble, non-flammable, and non-acidic, and can, therefore, be used for all types of systems, including copper and aluminium and in addition is environmentally friendly. The main benefit of this product is how it is added to a system. This **unique new product** is an approved concentrate of 330ml which will cope with a standard 100 litre system (**the equivalent of a standard four bedroom house**).

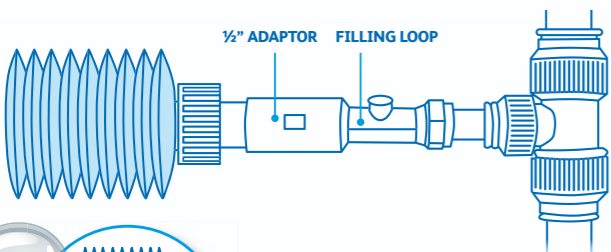
CalShot complies with the new Classification, Labelling and Packaging (CLP) Regulation, which is aligned with the Globally Harmonised System (GHS). Safety Data Sheets (SDS) require to be updated by December 2012 to the new REACH Annex II which sets out the scope for SDS and **CalShot** conforms to this regulation.

Manufactured to the recommendations of DIN 51360 and BSI BS2486:1997. **CalShot** complies with the new Classification, Labelling and Packaging (CLP) Regulation, which is aligned with the Globally Harmonised System (GHS). Safety Data Sheets (SDS) require to be updated by December 2012 to the new REACH Annex II which sets out the scope for SDS and **CalShot** conforms to this regulation.

How it works

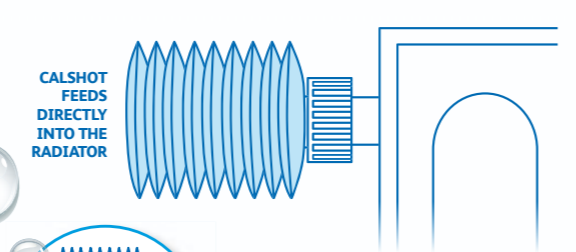
- 1 Connect to a radiator or through a filling loop**
It has a ½" BSP male neck on the bottle that fits directly into a standard radiator plus, it has a ½" BSP female barrel fitting which will fit directly into a filling loop, or alternatively it can be squeezed directly into a header tank.
- 2 Squeeze the bottle to release the inhibitor**
- 3 Detach and you're done. Simple as that!**

Installation through a filling loop



SQUEEZE CALSHOT'S UNIQUE CONCERTINA BOTTLE TO DELIVER THE INHIBITOR INTO THE SYSTEM. IT'S THAT SIMPLE!

Installation through a radiator



SQUEEZE CALSHOT'S UNIQUE CONCERTINA BOTTLE TO DELIVER THE INHIBITOR INTO THE SYSTEM. IT'S THAT SIMPLE!

CalShot

“CalShot can dose a system in as little as 5 minutes thanks to its unique concertina bottle - saving the installer time and money. **”**

CHARLES WYSOCKI - CALMAG

- ✔ **It doesn't need any other fittings** to dose into a radiator, filling loop or header tank
- ✔ **Concentrate formula** which will dose a standard system of 10-12 rads or 100 litres
- ✔ **Environmentally friendly**
- ✔ **Whole system protection**
- ✔ **BuildCert approved product**
- ✔ **Recommended by the Energy Saving Trust.**



THE UNIQUE SQUEEZE APPLICATOR



Save even more time with these:



CalShot Cleanser

Pre-commissioning cleanser for new and old systems for flushing sludge, flux and installation debris. Suitable for use with all components and will not harm aluminium or other metals. Require no neutralisation and can also remove light rust whilst helping to descale and soften water.

PRODUCT CODE: **CHEM-CALSHOT-CL**



CalShot Leak Sealer

Leak sealer which seals inaccessible leaks and weeping joints within 1-24 hours. Does not block pumps, valves or air-vents and reduces pressure loss in sealed systems by forming a soft seal within a short time. Remains in the system and there is no need to flush and will treat up to 10 radiators. **For best results use in conjunction with CalShot Inhibitor.**

PRODUCT CODE: **CHEM-CALSHOT-LS**

CM100

Protects & preserves heating systems for less

CM100 is a specially-formulated triple reagent formula that is not only exceptionally effective but also **very cost-efficient**. One litre can treat up to **10 radiators** (equivalent to a standard four bedroom house) or a 100 litre system, giving **multi-benefit protection** against the build-up of sludge, debris and limescale, whilst being safe for use with most metals in central heating systems.

Proven triple blend corrosion inhibitor suitable for all metals including aluminium. **CM100** is a very effective triple blend of corrosion inhibitors and specifically works well with steels, aluminium, copper and their alloys, and most materials found in a heating system.

Flush the system prior to introducing **CM100** and dose the system at 1%. Simply pour into the system – **CM100** must be left in the system.

Manufactured to the recommendations of DIN 51360 and BSI BS2486:1997. **CM100** complies with the new Classification, Labelling and Packaging (CLP) Regulation, which is aligned with the Globally Harmonised System (GHS). Safety Data Sheets (SDS) require to be updated by December 2012 to the new REACH Annex II which sets out the scope for SDS and **CM100** conforms to this regulation.

Comparison of approved chemicals

Opposite are the inhibitors that have BuildCert approval together with Energy Saving Trust Recommendation. This indicates that the performance of all these products are comparable and are of equal or approved to each other, for specification or usage purposes.

Please note, no other chemicals are approved under **both BuildCert and Energy Saving Trust Recommendations**.

COMPANY	PRODUCT	BUILD CERT APPROVED	EST APPROVED
Calmag	CalShot	✓	✓
	CM100	✓	✓
Adey	MC1 Gel	✓	✓
	MC1 Protector	✓	✓
Fernox	Protector MB1	✓	✓
	Alphi 11	✓	✓
	Protector F1	✓	✓
No Nonsense	Chemical Inhibitor	✓	✓
Sentinel	X100	✓	✓
Spirotech	Spiro Plus Protector	✓	✓



*All information and figures are correct at time of printing and taken from published information

“**CM100 has a triple blend, for long term corrosion protection** - helping you to save money.”

CHARLES WYSOCKI - CALMAG

PROTECT AND PRESERVE FOR LESS

- ✓ **Treats upto 10 radiators** or 100 litre system
- ✓ **Suitable for all metals**, including aluminium, steels, copper and their alloys and with all other materials that are commonly used in central heating systems.
- ✓ **Manufactured to the recommendations of DIN and British Standards**
- ✓ **Safety Data Sheets** produced to the new REACH Annex II standards
- ✓ **BuildCert approved product**
- ✓ **Recommended by the Energy Saving Trust.**



CM100 can be used in conjunction with:



CalCleanser
Pre-commissioning cleanser for new and old systems for flushing sludge, flux and installation debris. Suitable for use with all components and will not harm aluminium or other metals. Require no neutralisation and can also remove light rust whilst helping to descale and soften water.
PRODUCT CODE: **CHEM-CLEANSER-1L**



CalSealer
CalSealer seals inaccessible leaks and weeping joints within 1-24 hours. Does not block pumps, valves or air-vents and reduces pressure loss in sealed systems by forming a soft seal within a short time period. **CalSealer** remains in the system and there is no need to flush and will treat up to 10 radiators. **For best results use in conjunction with CalProtector.**
PRODUCT CODE: **CHEM-LEAKSEALER-1L**



Guaranteed confidence in water quality

Calmag's **fresh, innovative approach** to water quality has led to the development of the most extensive and effective range of water treatment solutions within the UK water treatment industry – our products are designed with the **needs of our customers** in mind – the merchant, installer and consumer. Calmag's philosophy is based on providing products and services to meet the real needs of all our customers – we don't simply produce what we think you should buy - Calmag have the **unique design** and production capabilities to produce what you want - when you want it!



Beware of imitations!

There have been a number of instances when customers have been under the impression that they have bought a Calmag product but, in reality, have been supplied with an alternative and inferior product that fails to match the industry-leading performance and aesthetic appeal of ours. So we strongly advise customers to **ask for our product by name**. Other products may seem to offer similar qualities, but if it isn't Calmag, it simply won't perform to our standards.

There are **two key ways to check** that you've purchased a genuine Calmag product: they carry the **WRAS approval** on scale inhibitors, and **BuildCert** and **ESTr** approvals on a range of chemical inhibitors.

Calmag is a member of and in partnership with:



Acid Neutralisers



Water Softeners



Water Filtration



Powerflushing

For more information or advice call our helpline on **01535 210320** or visit **www.calmagltd.com**

Fax: 01535 210321 Email: sales@calmagltd.com

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* All figures are taken from various published figures