

LO-E WINDOW COATING NANO-TECHNOLOGY



CUSTOMER INFORMATION BOOKLET





WARM HOMES BRITAIN LIMITED

WARM HOMES BRITAIN LIMITED MANAGE THE FOLLOWING SERVICES: -

RURAL ADVICE ENGLAND
RURAL ADVICE SCOTLAND
RURAL ADVICE WALES
WARM HOMES WINDOWS

COMPANY INFO:

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WHO ARE WE?

Warm Homes Britain have a Head Office in North Yorkshire and also have bases in Scotland and Wales. We provide expert advice on home energy saving and carbon reduction works. We offer National coverage through a range of approved partners and in some areas we also carry out work using our own in house teams. We are here to walk you through the complex world of saving energy and reducing your energy bills as well as government grants & funding.

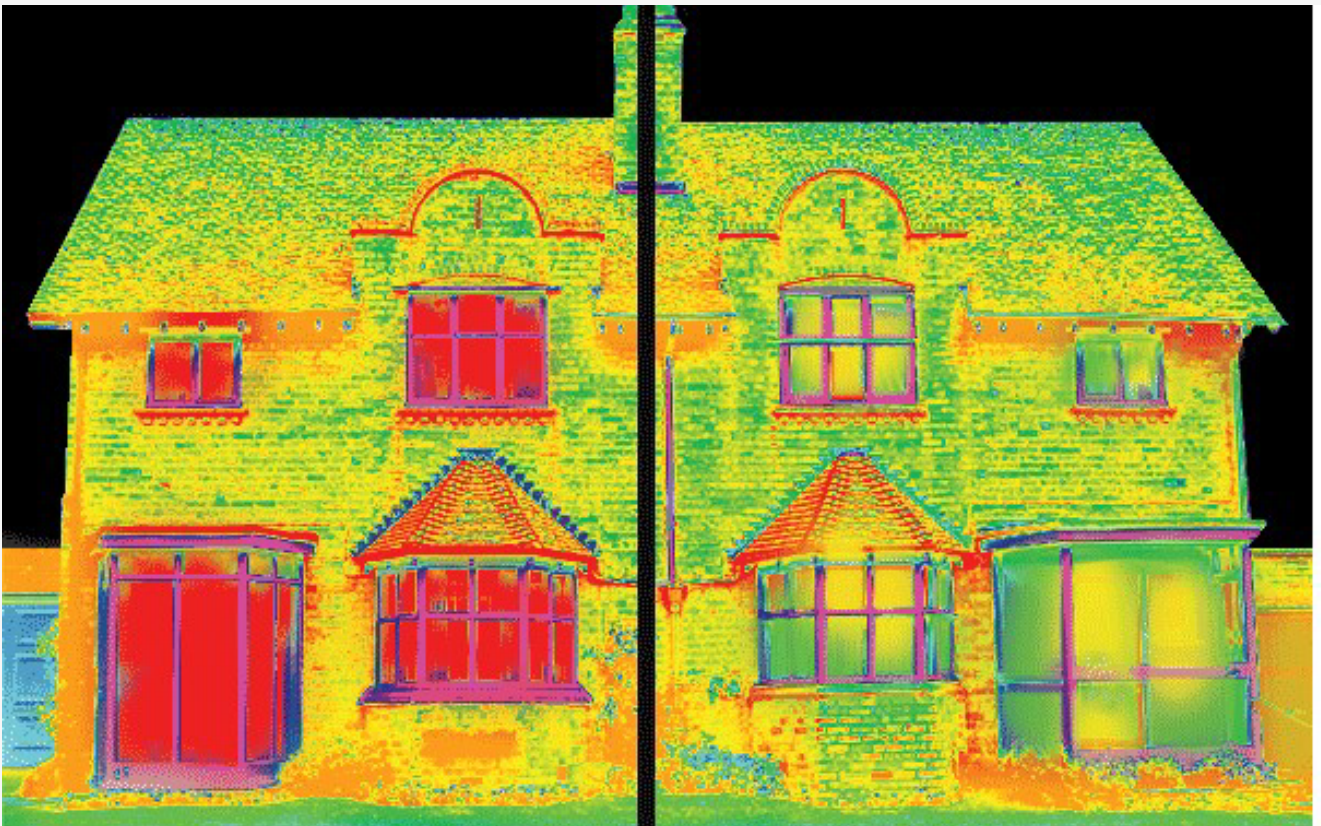
WHAT FUNDING IS AVAILABLE?

There are various different routes for funding and we keep an eye on what is available on a weekly basis. Long term funding is available through the ECO4 Scheme but there are lots of other schemes and incentives which we can help you take advantage of. Regardless of your circumstances we can always find a cost reduction or discount for people who come to us for assistance.



WHAT IS LO-E WINDOW COATING?

LO-E WINDOW COATING IS A NEW NANO-TECHNOLOGY WHICH INSULATES YOUR WINDOWS CUTTING HEATING BILLS BY UP TO 30%



Untreated Vs Treated

Lo-E window coating is a highly engineered nanomaterial liquid coating, applied to glass either in the manufacture process or in situ in a retrofit scenario by our trained and certified installers. It reduces heat transmission by between 20% to 40% and blocks 99% of UV and 80% of IR light, while only reducing visible light transfer by around 10%. The main features and benefits of this new nanotechnology are explained in this brochure.

HOW DOES IT WORK?

LO-E COATING IS MEASURED AND MIXED EXACTLY FOR THE SIZE OF YOUR WINDOWS

Lo-E window coating is made up of 2 parts, the nano material itself and a hardener which is added on site. The material is prepared and installed by one of our trained professionals using specifically designed chemical rollers. Although it initially appears frosted, it dries to a clear finish.



Mixing



Application

WHAT IS A NANO MATERIAL?

NANOMATERIALS ARE VERY COMPLEX BUT WE'VE TRIED TO EXPLAIN HOW THEY WORK HERE IN 1 PAGE

Lo-E Window Coating is a Nano material. This is any material where at least one dimension of the particles can be measured in the nanometer range. A nanometer is one billionth of a meter or one millionth of a millimeter, so it's pretty small!

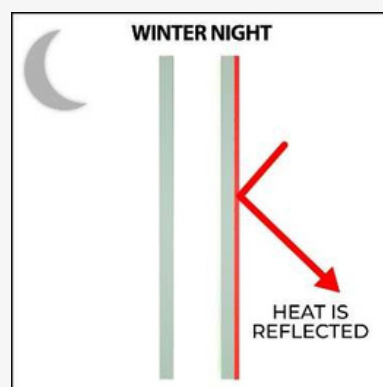
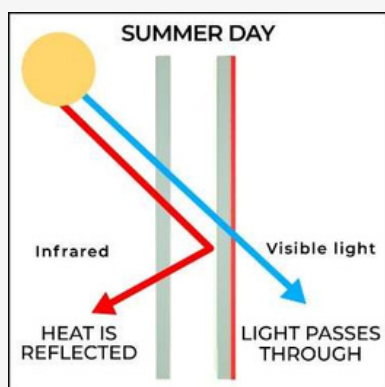
There are naturally occurring nano materials such as viruses, volcanic ash and certain sand particles. However scientists have also worked to engineer new nanomaterials with desirable properties to serve certain purposes.

Our industry had a need for a material which allows visible light to pass through glass but blocks IR (infrared) and UV (ultraviolet) light, because they have harmful cell changing properties. We needed a nanomaterial to do this as light travels in waves and the wavelengths are in the nanometer ranges, so we need a material at a cellular level that is on this scale to block certain light (or indeed let it through).

It's a serious technical challenge to blend a material that blocks some light wavelengths but not others. Scientists have used a range of materials to try and achieve this. These include; CTO (Cesium doped tungsten oxide), ATO (Antimony tin oxide) and ITO (Indium tin oxide).

Most manufacturers have used either ITO or ATO to try and develop Window Coating products. However, ITO is super expensive and ATO is not so good at blocking out IR light at 900-1,100nm which is considered to be the hottest direct heat in summer.

Lo-E Window Nano Technology uses CTO and the benefits of this are threefold. Firstly, it creates the absolute best IR cut of any engineered nanomaterial. Secondly, the finished product is cost effective versus competitors. Thirdly, by blending the CTO with the right proportions of acetates and resins the finished product can be applied very evenly and effectively without dripping or running. The result is an applied material (by an experienced installer) that can be tested anywhere on the window and its performance will be within 3% of the published performance in terms of visible light, UV and IR.



NO NEED FOR NEW WINDOWS

MOST PEOPLE THINK THEY NEED NEW WINDOWS THIS IS NOW NOT ALWAYS THE CASE



Lo-E Nano Technology applied to Double Glazed windows will give you a similar performance to Triple glazing. Apply the coating to Single Glazed windows and you will get a similar performance to double glazed windows. Lo-E window coating is a fraction of the cost of a full window upgrade and can be completed in 1 day with almost no mess, making it a much more cost effective and hassle free solution.

REDUCE BILLS BY UP TO 30%

WITH ENERGY BILLS GOING THROUGH THE ROOF LO-E WINDOW COATING IS A FAST WAY TO START SAVING RIGHT NOW!

UK University testing of Lo-E Nano coating has shown heating bills can be reduced by as much as 30%.

A lot of people have ensured their loft insulation and wall insulation is up to date but we have always had limited options with our windows.

Installation of the coating takes 1 day and you will start to save money on your heating bill within 24hrs.



AFFORDABLE IMPROVEMENT

LO-E WINDOW COATING IS A VERY AFFORDABLE SOLUTION AND PAYS FOR ITSELF IN A SHORT PERIOD OF TIME

The typical cost to treat a 3 bed semi-detached property is £1800. Compare this to around £10,000+ for Triple glazing. Our original assessment was that this product would pay for itself in as little as 2 years but with energy prices at an all time high and going up again this could now be significantly shorter.



CONSERVATORIES

TOO COLD IN THE WINTER AND TOO WARM IN THE SUMMER! WE HAVE A SOLUTION.

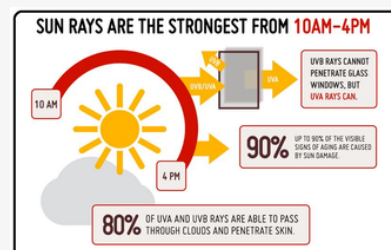


Conservatories are often too cold to use in the Winter and too warm to use in the Summer. Lo-E coating will greatly reduce the heat transfer both out of and in to your conservatory. This makes the space more useable, more comfortable and easier to manage.

COMFORT AND WELLBEING

UV RAYS ARE PROVEN TO CAUSE SKIN CANCER

As well as making the temperature more comfortable within a property, additional benefits include cutting UV and IR light entering the building these harmful rays can cause skin cancers. These rays can also damage materials and furniture within the premises.



CUT CONDENSATION BY 50%

UK UNIVERSITY TESTING HAS SHOWN THAT LO-E COATING REDUCES CONDENSATION BY UP TO 50%

Lo-E window coating reduces condensation by up to 50%. This is because the coating actually raises the temperature of the glass reducing the difference between the temperature of the glass and the temperature of the air in your home. Warm air meeting cold glass is what causes condensation and the bigger the difference the worse the condensation.



PREVENT MOULD FORMATION

MOULD IN YOUR HOME IS DANGEROUS AND SHOULD BE AVOIDED



Condensation on your windows for any longer than 24hrs can cause mould to form. Mould forming in your home is dangerous, it's a type of fungus that grows and develops in damp or humid conditions. Mould produces spores - these allow it to keep reproducing and growing. Breathing in these spores is responsible for most health problems caused by damp and mould in the home. Those most at risk from developing health issues from breathing in mould spores are; Babies and Children, elderly people, anyone with skin conditions, anyone with respiratory problems such as asthma and anyone with a weak immune system.

INDEPENDENTLY TESTED AND PROVEN

DONT TAKE OUR WORD FOR IT!

Lo-E window coating has been independently tested by top UK universities and trade bodies. The facts and figures in this brochure are quoted from their testing, results and conclusions.



DRAUGHT PROOFING

MOST PROPERTIES DRAUGHT PROOFING IS INADEQUATE



Draught-proofing is one of the cheapest and most effective ways to save energy - and money - in any type of building. Controlled ventilation helps reduce condensation and damp by letting fresh air in when needed. However, draughts are uncontrolled: they let in too much cold air and waste too much heat. We recommend addressing this at the same time as having Lo-E window coating applied to maximize the energy saving effect from your window arrays. Our installers are trained and qualified to replace draught proofing in your premises.

COMMERCIAL AND EDUCATION

BUSINESS ENERGY BILLS ARE AT AN ALL TIME HIGH

Commercial and Educational properties typically have large glazed areas. As a consequence they suffer large amounts of heat loss through their windows. This can be improved dramatically by adding Lo-E window coating. UK Testing has shown that properties with typical glazed areas can save around 30% on heating bills. This saving can be significantly increased in most commercial and educational buildings where glazed areas can be over 50%. With the forecasted increases in energy prices coming into effect Return on Investment can be achieved in under 2 years. Added to this is the improved environment for people inside the building as 80% of Infrared and 99% of Ultraviolet light are blocked by Lo-E coating.



INSTALLATION



- Any installer must attend the full accredited training course in order to professionally install Lo-E window coating.
- We can carry out both domestic and commercial window coating installations.
- Health and Well-being is more relevant now than ever before and making sure your home is warm, properly ventilated and free from damp is vital to ensuring your families health. We will offer advice on how to improve this situation on your home.
- All of our installers are fully employed and fully vetted and background checked in order to work in customers homes as well as schools and commercial premises.

GUARANTEES & QUALITY

Lo-E window coating comes with a manufacturers warranty of 10 years, this is backed and accredited by Qualitymark Protection who are one of the leading Insurance backed guarantee companies.

MEASURE

GUARANTEE LENGTH

LO-E WINDOW COATING
MANUFACTURERS WARRANTY

10 YEARS

DRAUGHT PROOFING
MANUFACTURERS WARRANTY

5 YEARS

SOLAR PANEL COATING



We have developed a variant of the window coating which works perfectly for solar panels, improving their efficiency.

Superhydrophobic, antireflective coatings show self cleaning, anti-dust, antipollution, anti-icing and antifogging features. Because of such properties, these coatings can improve the efficiency of solar panels by 20-30%*

**Source Science Direct; Nanomaterials-Based Coatings; Chapter 12 - Nanostructured superhydrophobic coatings for solar panel applications.*

Patented & 10 million m² installed

Super Hydrophobic - creating non-stick, self-cleaning effect

Removal of reflection - glass clarity while enhancing light passage means greater energy or light penetration through glass.

OUR PROCESS

Contact

You enter your details through one of our websites, give us a call or drop us an email

STEP
01



Telephone Survey

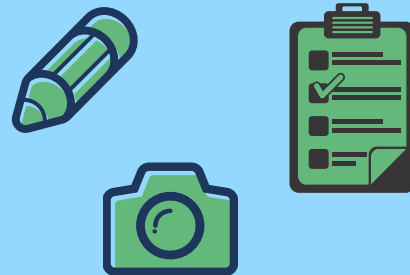
We have a chat and talk through your requirements and the details of the windows at your premises

STEP
02

Home Survey

Once we know what you require we come and take a look at your home to measure up and ensure we can complete the work

STEP
03



STEP
04

Installation

A team will visit on an agreed date to carry out the work, usually completed in 1 day

Inspection & Guarantee

Once complete the work may be independently inspected and our guarantees issued

STEP
05



FREQUENTLY ASKED QUESTIONS

HERE ARE SOME OF THE QUESTIONS WE ARE OFTEN ASKED

What does the coating look like once applied?

The coating does have a slight tint to it. A car windscreen must have 70% visible light transfer to be legal, our coating is around 75% for comparison, so lighter than your car windscreen. Although it does look slightly frosted when first applied it dries clear within 24 hours and achieves full clarity at 30 days.

How long does it take to dry?

The coating will usually be dry to the touch within 24hrs but should not be touched for at least 7 days. It should not be cleaned for 30 days.

How is the coating applied?

It is applied using specifically designed rollers. These rollers are weighed both before and after application to ensure exactly the right amount of coating has been added to the surface.

Are there Grants available for Window coating?

The coating is not fully funded but there are discount vouchers available from several different sources, we will advise you where these vouchers can be obtained.

How much can I expect to save by having window coating installed?

UK universities and trade bodies have shown that up to 30% saving to heating bills can be achieved on a typically glazed property. This will change depending on the amount of glazing, some commercial properties can have over 50% glazing so the savings can be much greater.

How long does the coating last?

Testing shows that the coating lasts for at least 15 years, the manufacturers warranty is for 10 years.

Is it applied Internally or externally

The coating can be applied to either the inside or outside of a window, we will assess which is best for your premises on survey.

How much does it cost?

The cost depends on how much glazing is in your property and the number of frames and details on the window. Typically a 3 bed semi detached property would cost £1800 to insulate all windows and door glass.

Can it be scratched or damaged?

After 30 days the coating will be set hard, at this point it has a great robustness rating similar to that of the glass itself.

How long will it take to install?

Most residential properties will be completed in 1 day. On a commercial basis, 1 team will complete around 20m² per day.

What do I need to do to prepare?

We recommend that you Hoover the night before and ensure windowsills are clear and dust free.

How much disruption will there be?

Apart from moving a few items on the day, disruption is minimal and you should be all back to normal within 24hrs.

Do I need draught proofing?

Our assessor will look at your draught proofing when they visit and make some recommendations.

What is the improvement in U-Values to my windows?

The table below shows the results of testing on some typical single and double glazed units, before and after the coating is applied

Type of Glazing	U-Value	G-Value	With Lo-E	
			U-Value	G-Value
Single Glazing	4.8	0.85	3.12	0.68
Double Glazing	3.1	0.76	2.07	0.67

NOTES

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