

# THE FACTORY 138 CARMARTHEN ROAD CROSS HANDS LLANELLI CARMARTHENSHIRE SA14 6TH

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### INTERNAL CONDENSATION

COLD AIR CANNOT ENTER THROUGH THE WINDOW TO COOL THE INSIDE SURFACE. LOW-E GLASS AND ARGON FILLING OF THE SEALED UNITS KEEPS THE INSIDE SURFACE WARMER, WHICH REDUCES THE OPPORTUNITY FOR CONDENSATION.

CONDENSATION IS THE RESULT OF THE AIR BEING SATURATED WITH TOO MUCH HUMIDITY OR WATER VAPOUR. WHEN THIS HAPPENS, THE AIR CANNOT HOLD THE EXCESS HUMIDITY, AND GETS RID OF IT BY CONVERTING GASES BACK TO DROPLETS ON COOL SURFACES

WINDOWS TYPICALLY ARE THE COLDEST OBJECT IN THE HOUSE IN WINTERTIME. ROOM SIDE CONDENSATION IS CAUSED BY EXCESS HUMIDITY IN YOUR HOME.

THE BOTTOM OF THE WINDOW IS THE COLDEST PART. COLD AIR SINKS. THE AIR NEAR THE TOP IS WARMEST AND HOLDS MOST OF THAT MOISTURE.

WINDOWS THEMSELVES DO NOT CAUSE CONDENSATION, BUT THEY ARE AN INDICATOR THAT HUMIDITY LEVELS ARE TOO HIGH. HIGH HUMIDITY CAN CAUSE SERIOUS MOISTURE PROBLEMS IN A HOME AND SHOULD BE CORRECTED. KEEP IN MIND THAT NEW HOMES RELEASE MOISTURE FROM NEW CONSTRUCTION MATERIALS THROUGH SEVERAL HEATING AND COOLING SEASONS. NEWER, "TIGHTER" HOMES TRAP HUMID AIR INSIDE; OLDER DRAFTY HOMES ALLOW EXCHANGE OF DRIER OUTSIDE AIR WITH INSIDE MORE HUMID AIR.

REDUCE HUMIDITY AND INCREASE VENTILATION IN YOUR HOME.

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### **EXTERNAL CONDENSATION**

UNDER PARTICULAR WEATHER CONDITIONS, DEW (OR FROST) FORMS ON ANY UNHEATED SURFACE (THE GROUND, ROOFS, WALLS, CARS ETC.) EXPOSED TO A CLEAR NIGHT SKY. IN THE PAST, THIS EFFECT HAS NOT HAPPENED ON THE GLASS IN HEATED BUILDINGS, SINCE THE HEAT THAT ESCAPES THROUGH THE GLASS WARMS THE GLASS UP SLIGHTLY AS IT PASSES THROUGH. EVEN CONVENTIONAL DOUBLE GLAZING ALLOWS SUFFICIENT HEAT TO ESCAPE TO PREVENT DEW FORMING ON THE EXTERNAL FACE OF THE GLASS.

HOWEVER, INSULATING UNITS INCORPORATING LOW EMISSIVITY GLASS AND ARGON GAS ARE SUFFICIENTLY RESISTANT TO THE PASSAGE OF HEAT (I.E. IT HAS SUCH GOOD THERMAL INSULATION) THAT IN CERTAIN POSITIONS AND IN SOME WEATHER CONDITIONS, IT IS NOW POSSIBLE FOR THE DEW TO FORM ALSO ON THE EXTERNAL FACE OF THE GLASS. THIS IS ONE VISIBLE MANIFESTATION OF HAVING SUPERIOR INSULATING GLASS. [AN ANALOGY CAN BE MADE WITH FROST ON ROOFS - THOSE WITH GOOD LOFT INSULATION CAN REMAIN FROSTED FOR A LONG TIME, WHILE THOSE WITHOUT QUICKLY DEFROST.]

IN ORDER FOR THIS TO HAPPEN, THE GLASS NEEDS TO BE EXPOSED TO LARGE AREAS OF THE NIGHT SKY. INTERVENING TREES, BUSHES OR OTHER BUILDINGS, WHICH BLOCK OFF PART OF THE SKY, REDUCE THE EFFECT. OTHER 'MICROCLIMATE' EFFECTS CAN ALSO ALLEVIATE IT. IT IS POSSIBLE TO GET A SITUATION WHERE SOME WINDOWS HAVE EXTERNAL CONDENSATION WHILE OTHERS NEARBY DO NOT. THIS IS A FUNDAMENTAL PHYSICAL EFFECT; INSTALLING ANOTHER LOW E, ARGON FILLED DOUBLE GLAZING UNIT OR TURNING THE UNIT AROUND WILL NOT ELIMINATE THIS PHENOMENON. IN COUNTRIES, SUCH AS SWEDEN, WHERE MOST GLAZING IS AT LEAST AS GOOD AS THE UNITS WE INSTALL, EXTERNAL CONDENSATION IS A WELL KNOWN AND ACCEPTED FACT OF BETTER COMFORT AND THERMAL INSULATION.

WHILST OLYMPIC HAS MADE EVERY EFFORT TO ENSURE THE ACCURACY AND EFFECTIVENESS OF THIS INFORMATION, OLYMPIC MAKES NO REPRESENTATION AS TO THE ACCURACY OR EFFECTIVENESS OF THE INFORMATION AND TAKES NO RESPONSIBILITY FOR ANY LOSS, DAMAGE OR INJURY WHICH MAY BE CAUSED AS A DIRECT OR INDIRECT RESULT OF THE USE OF THIS INFORMATION



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## GENERAL MAINTENANCE OF u.P.V.C. WINDOWS & DOORS LOCKS, HANDLES, HINGES ETC

WE RECOMMEND THAT EVERY 6 MONTHS - REMOVE ALL DUST PARTICLES WITH A SOFT CLOTH/KITCHEN PAPER AND LUBRICATE ALL HARDWARE (HINGES, LOCKS, GEARING, HANDLES, RUBBER SEALS ETC) WITH A SILICONE BASED LUBRICANT OR SILICONE BASED POLISH (Mr SHEEN/PLEDGE).

IMPORTANT LUBRICATION TO FRICTION HINGES CASEMENT (OUTWARD OPENING) WINDOWS –
TAKE PARTICULAR CARE TO ENSURE THAT THE BACK KNUCKLE OF THE HINGE IS WELL
LUBRICATED FAILURE TO DO SO MAY RESULT IN OPENING CASEMENTS SITTING AWAY FROM THE
RUBBER SEALS.

IMPORTANT LUBRICATION TO LOW ACCESS u.P.V.C. OR COMPOSITE DOORS RUBBER SEALS ON THE LOW THRESHOLD SHOULD BE KEPT CLEAN AND FREE FROM DEBRIS AND LUBRICATED OFTEN THEREBY AFFORDING SMOOTH OPERATION. FAILURE TO DO THIS WILL GIVE A STRONG RESISTANCE WHEN CLOSING.

DO NOT USE ANY OIL BASED PRODUCTS (3 IN 1 OIL, WD40 OR SIMULAR) AS THEY STAIN THE u.P.V.C. AND HOLD DIRT AND GRIT TO THE SURFACE OF HINGES/LOCKING SYSTEMS ETC

## GENERAL CLEANING OF u.P.V.C. FRAMES

EVERY 6 MONTHS ALL u.P.V.C. FRAMES ARE QUICK AND EASILY CLEANED WITH WARM WATER USING A SOFT CLOTH OR KITCHEN PAPER AND NORMAL DOMESTIC DISHWASHER (FAIRY) LIQUIDS, RINSED AND DRIED WITH A SOFT CLOTH OR SIMILAR

ABRASIVE OR GRITTY AGENTS AND "SCOTCH PADS" SHOULD NOT BE USED UNDER ANY CIRCUMSTANCES BECAUSE THESE AGENTS WILL ROUGHEN AND DESTROY THE SURFACE FINISH. IN PARTICULAR SOLVENTS (ACETONE, CELLULOSE THINNER ETC.) MUST BE AVOIDED OTHERWISE THE SMOOTH GLOSSY SURFACE WILL BECOME LACKLUSTRE AND ROUGH.

## GENERAL CLEANING OF GLASS

GLASS SHOULD BE CLEANED USING ONLY CLEANING MATERIALS WHICH ARE FREE OF GRIT AND DEBRIS (TO AVOID SCRATCHING AND MARKING OF THE GLASS SURFACE). ONLY DETERGENTS AND CLEANING SOLUTIONS WHICH ARE RECOMMENDED FOR CLEANING GLASS SHOULD BE USED. MILD DETERGENTS ARE PREFERABLE.

DO NOT USE CLEANERS WHICH CONTAIN HYDROFLUORIC OR PHOSPHORIC ACID AS THEY ARE CORROSIVE TO THE GLASS SURFACE. DO NOT CLEAN THE GLASS WHEN THE GLASS IS HOT OR IN DIRECT SUNLIGHT. DO NOT ALLOW CLEANING SOLUTIONS TO CONTACT THE EDGES OF LAMINATED GLASS, INSULATING GLASS UNITS. ABRASIVE CLEANERS, POWDER BASED CLEANERS, SCOURING PADS OR OTHER HARSH MATERIALS SHOULD NOT BE USED TO CLEAN WINDOWS OR OTHER GLASS PRODUCTS.

THIS INFORMATION IS OFFERED AS A GENERAL GUIDE ONLY. THIS GUIDANCE DOES NOT PRECLUDE THE USE OF OTHER METHODS, MATERIALS OR EQUIPMENT; HOWEVER THE USER SHOULD UNDERTAKE CAREFUL EVALUATION AND MAKE SUITABLE ENQUIRIES OF THE SUITABLITY OF ALTERNATIVE METHODS, MATERIALS OR EQUIPMENT, BEFORE USING THEM.