



Illustration only

MEL-TEMP.

1101D 115V ~ 50/60Hz

1102D 230V ~ 50/60Hz

Digital Melting Point

INSTRUCTION BOOK.

Please take your time to read your MEL-TEMP Digital Melt Point Apparatus instruction book in order to understand the safe and correct use of your new Bibby Scientific product.

It is recommended the Responsible Body for the use of this equipment reads this Instruction book and ensures the user(s) are suitably trained in its operation.

CONTENTS

Section 1	Introduction	Page 3
Section 2	Symbols and using this Instruction book	Page 4
Section 3	Safety Information.	Page 5
Section 4	Unpacking and contents	Page 7
Section 5	Installation	Page 8
Section 6	Environmental Protection.	Page 9
Section 7	Product Operation.	Page 10
Section 8	Technical Specification.	Page 18
Section 9	Maintenance	Page 20
Section 10	Customer Support	Page 22
Section 11	Spares and Accessories	Page 23
Section 12	Notes	Page 25
Section 13	EC declaration of Conformity	Page 28
Appendix A	Decontamination Certificate.	Page 24

© The copyright of this instruction book is the property of Bibby Scientific Limited. This instruction book is supplied by Bibby Scientific Limited on the express understanding that it is to be used solely for the purpose for which it is supplied. It may not be copied, used or disclosed to others in whole or part for any purpose except as authorised in writing by Bibby Scientific Limited. Bibby Scientific Limited reserves the right to alter, change or modify this document without prior notification.

In the interest of continued development Bibby Scientific Limited reserve the right to alter or modify the design and /or assembly process of their products without prior notification.

This product is manufactured in Great Britian by Electrothermal, part of the Bibby Scientific Group of companies.

Bibby Scientific Limited. Beacon Road, Stone, Staffordshire ST15 0SA, Great Britain.

Tel: +44(0)1785 812121 Fax: +44(0)1785 810405

1. INTRODUCTION.

Your Bibby Scientific's MEL-TEMP Digital Melting Point Apparatus has been designed for general purpose laboratory use in which samples submitted for analysis are enclosed in a glass capillary tube and brought to a melt point condition under strict controlled parrameters of time and temperature.

An advanced Microcontroller and step through menu system accuratly controls the oven temperature and ramp rate. Melt temperatures can be viewed using the keypad.

Two ramp rates are offed. A quick ramp is provided to define the approximate melt temperature of your sample while the slower ramp rate is provided to accurately attain the true melt temperature of your chemical sample.

White LED oven illumination assists in the clear viewing of melt samples.

Vesions of Mel-Temp that support Firmware version V0.29 and above are equiped with ECO mode facility.

2. SYMBOLS AND USING THIS INSTRUCTION BOOK

2.1. Throughout this Instruction book the following symbols are shown to identify conditions which pose a hazard to the user, or to identify actions that should be observed. These symbols are also shown on the product, or its packaging. When a symbol is shown next to a paragraph or statement it is recommended the user takes particular note of that instruction in order to prevent damage to the equipment or to prevent injury to one's self or other people.

To prevent injury or equipment damage it is the manufacturer's recommendation that all persons using this equipment are suitably trained before use.

2.2. Symbols defined.



Caution, risk of danger. See note or adjacent symbol.



Recyclable Packing Material



Do not dispose of product in normal domestic waste.



Refer to this Instructions book.



Bio Chemical Hazard. Caution required. Will require decontamination.



Caution / risk of electric shock.

3. SAFETY INFORMATION.

This product has been designed for safe operation when used as detailed in accordance with the Manufacturer's instructions.

NOTE: Failure to use this equipment in accordance with the manufacturer's operating instructions may compromise your basic safety protection afforded by the equipment and may invalidate the warranty / guarantee. The warranty / guarantee does not cover damaged caused by faulty installation or misuse of the equipment.

This equipment is classified as Class O (EN60519-2) with regard to over temperature protection and should be used accordingly.

3.1. Prevention of Fire and Electric Shock.



Ensure the Mains Power Supply conforms to rating found on the data plate located on the underside of your MEL-TEMP melting point power supply.



Do not attempt to gain access to the inside of the Power Supply. There are no serviceable parts inside.

3.2. General Safe Operating Practice.



Always follow good laboratory practice when using this equipment. Give due recognition to your company's safety and legislative health & safety procedures and all associated legislation applicable to your areas of operation. Check laboratory procedures for substances being heated and ensure all hazards (e.g. explosion, implosion or the release of toxic or flammable gases) that might arise have been suitably addressed before proceeding. (Consult your organization's practice).



Ensure equipment is used on a clean, dry, non-combustible, solid work surface with at least 300mm suitable clearance all around from other equipment.



<u>**Do not**</u> position the MEL-TEMP Melting Point Apparatus so that it is difficult to connect / disconnect from the Power Supply.



Do not immerse any part of this equipment in water / fluid.



It is $\underline{\text{not}}$ recommended to leave any heating apparatus unattended during operation.



Only use Original Equipment Manufacture's Parts and Accessories. Ref Section 11.

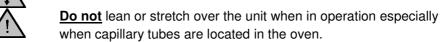


The equipment is not spark, flame or explosion proof and has not been designed for use in hazardous areas in terms of BSEN 60079-14:1997. Keep flammable, low flash point substances away from

the apparatus.



<u>Do not</u> operate or handle any part of this product with wet hands.





<u>Do not</u> to look directly at the LED oven illumination light source while turned on.



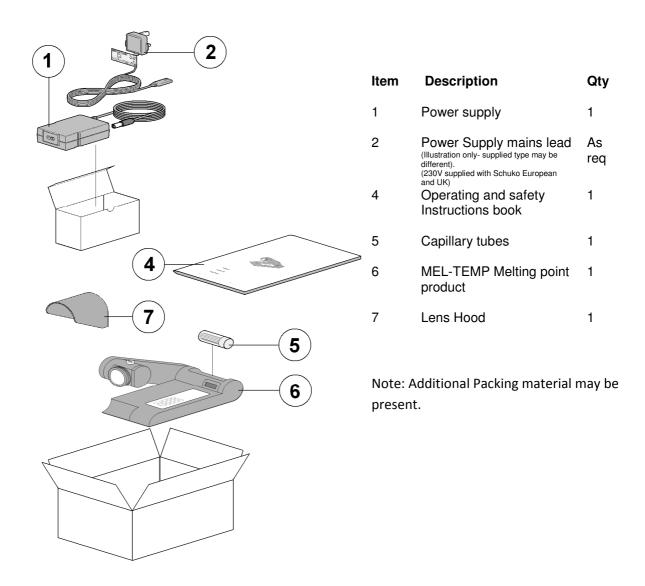
Take care when handling glass capillary tubes. They may hot when removed from the oven.



Take care with the cut ends from capillary tubes. Always dispose of used capillary tubes in a safe manner.

4. UNPACK AND CONTENTS.

4.1. Please check the contents of your carton against the Mel-Temp diagram.



For your future reference	Unit Serial Number	Unit Model/Cat Number.
please record your products		
Serial and Model numbers.		

5. INSTALLATION.

- 5.1. Electrical Safety and Installation.
 - 5.1.1. This equipment is designed to safe under the following conditions:-
 - Indoor use.
 - Altitude up to 2000 meters.
 - Temperatures between 5°C and 40°C.
 - Maximum relative humidity 80% for temperatures up to 31°C decreasing linearly to 50% relative humidity at 40°C.
 - Mains supply voltage fluctuations up to \pm 10% of the nominal voltage.
 - Transient overvoltages typically present on the mains supply. (Overvoltage category II)
 - Applicable rated pollution degree 2.
 - 5.1.2.Check the voltage on the PSU data label. Ensure the rating conforms to your local supply.

6. ENVIRONMENTAL PROTECTION.

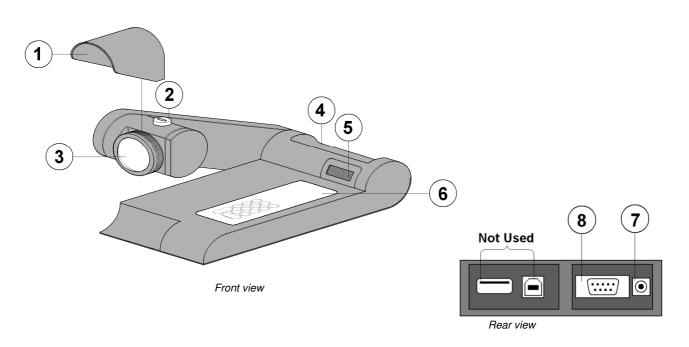
- 6.1. Maximum consideration to environmental issues within the design and manufacturing process of this product without compromising product performance and value.
- 6.2. Packaging materials have been selected such that they may be sorted for recycling.
- 6.3. At the end of your product and accessories life, it must <u>not be</u> discarded as domestic waste. Ref: EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment Directive (WEEE). Please contact your distributor / supplier for further information. For end users outside of the EU consult applicable regulations.
- 6.4. This product should only be dismantled for recycling by an authorised recycling company.

This product and accessories must be accompanied by a completed Decontamination Certificate prior to any disposal. Copies of the Certificate are available from your distributor of Bibby Scientific's MEL-TEMP products, alternatively you may copy and enlarge from 'Appendix A' of this instruction book.

Bibby Scientific's Electrothermal branded product range is registered with the Environment Agency under the name of as Electrothermal Engineering Limited as being a producer of WEEE (Waste Electronic and Electrical Equipment) through b2b Compliance, an authorised waste collection compliance scheme.

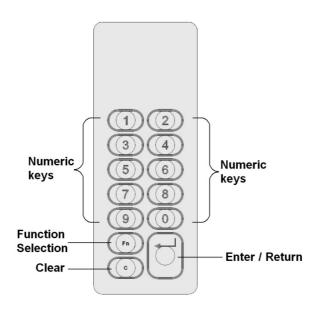
7. PRODUCT OPERATION.

7.1. Overview.



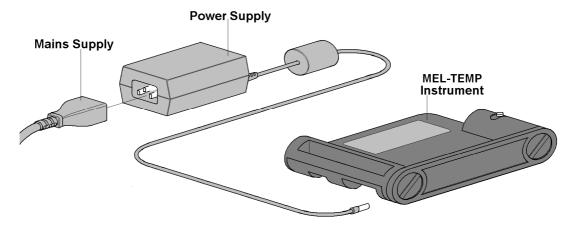
Number Description

- 1 Lens hood
- 2 Capillary Guide
- 3 Lens
- 4 Capillary tube tray
- 5 2 x 12 digit display
- 6 Keypad
- 7 Power input
- 8 RS232 calibration connection socket

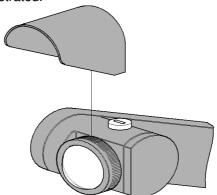


Keypad layout

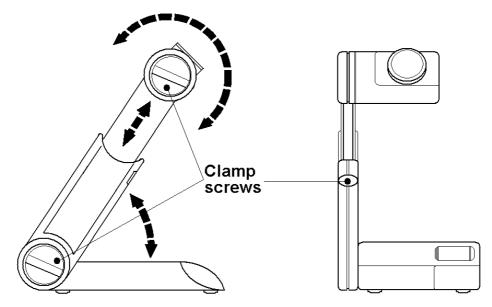
7.1.1. Connect the mains supply lead and power supply to your MEL-TEMP as illustrated.



7.1.2. The lense hood attachment is optional It's purpose is to assis in viewing the sample when using the MEL-TEMP in direct light. Slide the lense hood over the threaded back section of the lense as illustrated.



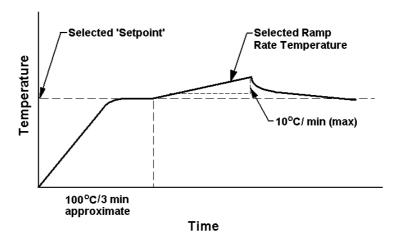
7.1.3.Adjust the arm height and oven head angle to suit by loosening the clamp screws and adjusting as required. Retighten the clamp screws after making adjustments. Always loosen the clamp screws before making adjustments.



7.1.4. Turn on at the mains electical supply and observe the MEL-TEMP goes through a boot up and self check routine which include a diplay of the firmware issue release number.

7.2. Principles of Operation.

- 7.2.1. During operation the various parameters of the sample analysis are shown on the liquid crystal display, and all the stages of the process are indicated by the L.E.D. illumination or audible warning. The principles of the operation are as follows:-
 - Guided by knowledge of the expected melting temperatures of the sample, a 'Set Point' is established and its value keyed in.
 - The oven temperature is driven to meet the 'Set Point' at maximum rate.
 - After a short delay for the oven temperature to stabilize at the 'Set Point', the ramp is activated and the temperature now increases linearly at the much slower ramp rate, during which time the melt analysis takes place.
 - The melting of the sample is observed and the temperatures registered v the MEL-TEMP keypad at the appropriate time.
 - Melt temperature information is now available for review on the display until further melts overwrite existing data or the MEL-TEMP is turned off at the mains electrical supply.
 - The oven temperature may now be directed to a new 'Set Point' if required for the next analysis.



7.2.2. Preparation of Samples.

To obtain the best results the samples under melt should be perfectly dry. Drying is best accomplished by storing the samples in vacuum desiccators over a suitable drying agent such as phosphorus pent oxide. Always dry hygroscopic samples.

Provided the sample is dry there is usually little difficulty in introducing a small amount of sample into the capillary tube. Insert the tube into your sample to gather material. Stand the tube upright and then tap the tube on the bench to compact the material at the tube base. It is important not to use too large a sample, a quantity occupying no more than 1-2 mm of the bottom of the tube is ample. If this is exceeded accurate and sharp melt reading points may not be obtained. Care should be taken to see the sample beds down to the bottom of the tube as large air pockets can cause false melt observations.

Please not sample preparation should be undertaken independently of the MELTEMP apparatus.

7.2.3. Determination of Melting point.

In recording melting points, the operator may wish to observe four distinct phases:

- a) First signs of change (darkening, shriveling, sintering, etc). These changes may be due to loss of solvent or crystallization. Occasionally one can see the solvent condensing on the cooler portion of the tube.
- b) First signs of liquid formation.
- c) Formation of meniscus.
- d) Formation of a completely clear liquid.

Not all compounds will behave in this manner however. With many, epically where the material is in a high state of purity, no change may be seen before any liquid appears. Some materials will be seen to sublime, rather than melt above 300 ℃

Decomposition may often be accompanied by evolution of gas.

Pure compounds will be expected to pass through the 3 stages a) c) and d), within a range of 1 °C.

7.2.4.Interpretation of Results.

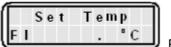
It is generally accepted the formation of a meniscus should be regarded as the figure to be recorded for a single temperature melting point. Where a range is quoted, it can generally be assumed reference is being made to stages b) to d) inclusive. The range will generally cover no more than 1 °C for pure compounds, but may well extend to 3 or 4 °C for others. The range will often be greater when decomposition or sublimation is experienced. When using the equipment to determine the melting point of more than one sample of the same compound at a time, the average of the meniscus temperature (onset of melt) should be taken.

7.3. MEL-TEMP Operation.

7.3.1.Connect the MEL-TEMP to the power supply as previously described. It will perform a self check while displaying the model and firmware version. The display will then turn to the Home screen which says 'Ready' and shows the MEL-TEMP ovens current temperature.



- 7.3.2.F1 is the Home screen for setting temperatures and running the Mel-Temp. Press 'Fn' key to enter the F2 screen. The F2 screen will display the details of the last performed melt sequence. To toggle between F1 home screen and F2 Melt recall screen press the 'Fn' key.
- 7.3.3.To commence melt setup and perform a melt sequence, ensure the unit is in the F1 home screen.



Press the return key.

- 7.3.4. You are now asked to 'Set the Temperature'. Use the key pad to enter the required set point temperature. Refer to paragraph 7.2.1 Principals of Operation. Once the desired set point temperature has been entered press the return key.
- 7.3.5. You are now asked to select your preferred ramp rate. Press 1 for 1 ℃/min or 2 for 10 ℃/min. Upon selection the MEL-TEMP will commence heating to the set point.
- 7.3.6.As the MEL-TEMP heats up to the set point temperature you will see four asterisks progressing across the low half of the display screen indicating the closeness of the oven temperature to the set point temperature. Flashing asterisks indicates the oven is in an active state. When the set point temperature has been reached the MEL-TEMP will beep three times and all four asterisks will stop flashing and be on constantly.
- 7.3.7. Insert your chemicals sample and allow the MEL-TEMP oven and chemicals to stabilize for a couple of minutes. Press the return key to commence ramping at the previously selected ramp rate.
- 7.3.8. When the first melt is observed press the return key. Up to four melt stages may be performed as described in Paragraph 7.2.3 'Determining melt'. Press the return key every time a melt is observed. Once you have completed all the melts you require (maximum of four melt stages be recorded) press the 'Fn' to move out of melt record mode.
- 7.3.9. You are now asked if you wish to turn off the oven. Press key 1 for **Yes** or key 2 for **No**. If you are going to perform subsequent melts then leave the oven on. The MEL-TEMP oven will reset back to the previous set point temperature.

Note: If you perform subsequent melts you will overwrite existing data. To view existing data always turn the oven off and then select F2 by pressing the Fn button to toggle into F2 mode.

7.3.10. **Reading the recorded melt data.** From the home screen press the 'Fn' key to enter F2 Melt recall screen. Press the return key to display the melt point temperature. Press the return key to display the temperature the second melt recorded and so on for the third and fourth melts. To exit the screen press 'Fn' to return to the (F1) Home screen.

Note: Only the last recorded batch may be viewed. Previous melt data will be over written.

Note: data will be lost if the MEL-TEMP is turned off or disconnected from the electrical supply.

7.3.11. To help cool down a hot oven remove the capillary tube guide and insert a cold finger. (See Spares and Accessories section 11).

ECO Mode Setting.

Eco Mode is provided to save on power when the Mel-Temp keypad remains untouched for a pre specified length of time. The default setting is one hour unless adjustments are made. Upon subsequent use the settings will be remembered until the Mel-Temp is turned off at the mains electrical supply. Power resumption will see the Mel-Temp return to the default setting. As well as being able to select the ECO power off time the user can select which functions of the ECO facility they wish to have operational. The default setting for the oven on / off is always oven on. However, if the instrument is not at a set point when ECO mode is entered, display will show OVEN OFF

7.3.12. From the home screen press the 'Fn' twice to enter F3 ECO Mode.

To accept entry to ECO mode press the 'Enter' Key. To decline press the function key where you are taken back to the F1 home screen.

7.3.13. Use the key pad to set the hours and minutes the required before the ECO mode

power saving cuts in. (To enter 1 hour 30 minutes press 0130). By entering H00 M00, ECO mode will not be activated until power disconnect / reconnect. Press 'Enter' to accept the time setting. Press clear to re-enter a different time. **Note:** The minimum settable time is 1 hour. The maximum is 12 hours.

7.3.14. You are now asked if you wish for the oven to be turned off as well as display and

back light LED's. Press 1 for yes and 2 for no. display will revert back to the F1 home screen.

- 7.3.15. When the Mel-Temp enters ECO mode the Oven illumination LED will turn off. The display back light will also extinguish and depending on the selection made so may the oven. To show the Mel-Temp is in ECO sleep mode the display will either display 'ECO Sleep Oven off' or 'ECO sleep Oven on' accordingly.
- 7.3.16. To awaken the Mel-Temp press any key on the keypad. The Mel-Temp will return to its pre sleep condition.

7.4. Caliabration Procedure.

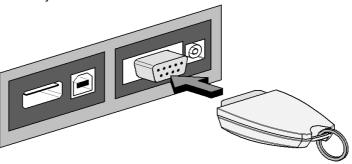
For equipment calibration purposes and to minimize variation between repeat measurements all calibrations should be taken using 2mm diameter capillary tubes.

Calibration should be carried out annually, or whenever the performance of the apparatus is suspected e.g. a shift is expected results is observed. The apparatus must either be returned to the dealer/manufacturer for calibration, or calibration must be carried out in the following manner, using Calibration key AZ9253 and certified calibration chemicals such as Vanillin, Caffeine and sulphanilamide available as SMP-KIT. (See Spares and Accessories section 11).

- 7.4.1. Switch the unit on and ensure the MEL-TEMP has settled into a constant state
- 7.4.2. Perform a melt with each of the standard chemicals and note the readings.
- 7.4.3. Compare the results obtained with the melting points shown on the certificates supplied with each chemical and ascertain whether the unit performs within acceptable limits.

If it is decided that re-calibration is required proceed as follows:-

- 7.4.4. Switch off the unit and allow it to cool sufficient for the oven temperature to be below that of the first melt chemical set point.
- 7.4.5. When the unit is cool switch it back on and allow it to perform the start up routine. Observe the ambient temperature for the oven is less than 50 °C.
- 7.4.6.Insert calibration key into the RS232 socket located on the rear of the MEL-TEMP.



CALIBRATION

LOW TEMP

7.4.7. Observe the display screen says accept entry into the calibration mode.



- 7.4.9. Press the return key to accept the selected temperature. The MEL-TEMP will comence ramping at a rate of 1 °C/minute. This is non adjustable.
- 7.4.10. Observe when the full chemical melt using Vanillin occurs and press the return key to record the melt temperature.



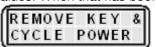
- 7.4.11. The display will now say is found on the certificate available from the Electrothermal Website or via electrothermalhelp@bibby-scientific.com. Enter the chemical reference value using the numeric keypad. Press the return key to accept the entered value.
- 7.4.12. You are now asked to set the High Temperature set point value of 161.0 ℃ if using Sulphanilamide and 234.0 ℃ if using Caffiene. Press the return key.

HI TEMP

- 7.4.13. The MEL-TEMP will start to ramp up the temperature at a rate of 1 °C/minute.
- 7.4.14. Observe the onset of melt and press the return key to record the value.
- 7.4.15. The display will now ask for the certified chemical melt value to be entered.

ENTER CHEM CERTIFIED MP. Enter the chemical reference value using the numeric keypad. Press the return key to accept the entered value.

7.4.16. A preprogrammed algorithm will now calculate the calibration temperature for all melt values. When that has been done the display will say.



7.4.17. Remove the calibration key and powerdown the MEL-TEMP as directed by the display. It may now be powered back up again ready for use. Calibration settings will now take effect.

8. TECHNICAL SPECIFICATION.

8.1. MEL-TEMP Features

32- bit processor.

3 capillary oven tubes up 2mm OD (storage for 1 pack of capillary tubes).

Tube guide removal for cleaning and use of cold finger

40mm MEL-TEMP lens (magnification x 8) removable and with a justable focus.

13 – key membrane keypad

White 3 x Super Flux LED's

Selectable ramp rate of 1 °C/min and 10 °C/min

4 x 1 Melt memory capacity Pack of 50 capillary tubes

8.2. General specification.

Electrical specification

Total power consumption 45W

Oven control Closed loop P.I.D.

Oven illumination 3 x white Super Flux LED's

Illuminous Intensity (per LED) 3500 Lux

Oven operating temperature range. Ambent +5 °C to 400 °C

Power supply PSU

When ordering a replacement PSU, always quote your MEL-TEMP serial number.

Input voltage $100 - 240 \text{V} \sim 50.60 \text{Hz}$.

Output voltage 15V DC

General specification

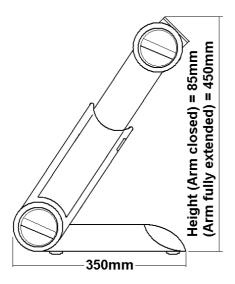
Temperature display range 1 °C to 405 °C

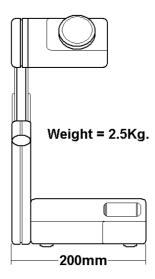
Display resolution 1.0 ℃

Accuracy \pm 1% of set temperature Ramp rate $1 \,^{\circ}$ C or $10 \,^{\circ}$ C selectable. Display 12×2 backlit matrix LCD

Control Sensor Platinum Resistance Sensor (PT100).

8.3. Weights and Dimensions.





9. MAINTANANCE.

9.1. General Information.

Unplug the unit from the Power supply and allow it to cool before undertaking any maintenance tasks.

Maintenance should only be carried out under the direction of the Responsible Body, by a competent electrician. Failure to do so may result in damage to the product and in extreme cases be a danger to the end user.

Preventive maintenance for the equipment should include keeping the unit clean and protecting it from spillage, contamination or corrosive environments.

9.2. Spillage Procedure.

In case of solution spillage, turn off the MEL-TEMP and disconnect it from the Power Supply Unit. For spillage wipe off the solution using a water dampened cloth and dry thoroughly before further use.

Ensure the unit is dry before further use. The Responsible Body shall check the electrical safety of the unit. Only if all safety requirements are met can the unit be used again. The above procedure is intended as a guide. Should spillage occur with a toxic or hazardous fluid then special precautions may be necessary.

Observe special precautions for handling contaminated substances see Section 9.3

9.3. Decontamination.

If the equipment has been exposed to toxic, radiological or biological contamination, the Responsible Body is responsible for carrying out appropriate decontamination. If hazardous material has been spilt on or inside the equipment, decontamination should only be undertaken under the control of the Responsible Body with due recognition of possible hazards. Before using any cleaning or decontamination method, the Responsible Body should check with the manufacturer the proposed method will not damage the equipment.

Decontamination Certificate.

<u>Note:</u> In the event of any part of this unit becoming damaged, the damaged item(s) should be returned to the manufacturer for repair accompanied by a decontamination certificate. Copies of the Certificate are available from Distributor/Manufacturer. Appendix A of this Instructions book may be copied and enlarged. At the end of life this product must be accompanied with a Decontamination Certificate.

This product contains fiber's consisting of the following elements. Avoid disassembly of the oven.

Component (%)
Alkaline Earth Silicate (HT mineral wool) 50 - 70
Alkaline Earth Silicate (Talc) 10 - 40
Inorganic Binder 5 - 10
Organic Binder 2 - 5

These products are insulating fiber boards, forms and shapes having either rigid or flexible structure

MAY IRRITATE EYES, SKIN AND RESPIRATORY TRACT

Pre-existing medical conditions, including dermatitis, asthma or chronic lung disease may be aggravated by exposure. Individuals who are atopic (with history of allergies) may experience greater amounts of skin and respiratory irritation.

Toxicology

The fiber used in these products has been the subject of limited testing. The fiber Chemistry is within the regulatory (European Commission Directive 97/69/EC)

Definition as a "man-made" vitreous (silicate) fiber with random orientation with Alkaline oxide and alkaline earth oxide (Na2O, K2O, CaO, MgO, BaO) content greater than 18% by weight.

The fiber has been tested pursuant to EU protocol ECB/TM/27 Rev 7 Note Q Directive 97/69/EC. The results were below regulatory thresholds hence the products are no longer subject to EU classification and there is no EU labeling requirement regarding respiratory disease potential.

Epidemiology

These products have not been the subject of epidemiological study. Epidemiological studies related to other products containing other fiber chemistries of similar solubility have not identified a statistically significant incidence of exposure related respiratory disease.

Classification and labeling

Because of its high content of alkali earth oxide and because of the toxicological properties of the fiber used in these products, it is not classified as a carcinogen under Directive 97/69/CE. Further toxicological investigations are being carried out to confirm this position. It is not irritating to skin according to the test method B4 in Annex 5 of Directive 67/548/EC. Consequently VecoBoard MSF1260C, VecoForm MSF1260C and Vecoflex MSF1260C products do not require hazard warning labels.

The information presented herein is based on data considered to be accurate as of the date of preparation of this statement. However, no warranty or representation expressed or implied, is made as to the accuracy or completeness of the foregoing data and safety information, nor is any authorization given or implied to practice any patented invention without a license. In addition, no responsibility can be assumed by the vendor for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices, or from any hazards inherent in the nature of the product.

For further information contact Electrothermal, (See Customer support) or your distributor.

10. CUSTOMER SUPPORT.

For help and support in using this product, please contact Customer Services at the following address.

Bibby Scientific Limited. Beacon Road, Stone, Staffordshire ST15 0SA, Great Britain.

Tel: +44(0)1785 812121 Fax: +44(0)1785 810405

 General enquiries : info@bibby-scientific.com

 Order enquiries : sales@bibby-scientific.com

 Technical support : <u>electrothermalhelp@bibby-scientific.com</u>

www.electrothermal.com

For the America's and Canada, contact: Techne Incorporated, 3 Terri Lane, Suite 10 Burlington, NJ 08016 USA.

Toll free:800-225-9243Tel: 609-589-2560

Fax: 609-589-2571

Email: labproducts@techneusa.com

Http www.techneusa.com

11. SPARES AND ACCESSORIES.

AZ9001 Cold Finger.

AZ9002 Dust Cover

SMP-KIT Calibration chemicals Vanillin, Sulphanilamide and Caffeine

AZ9253 Calibration key

AT4043 Capillary Tubes 2.0mm (1000 capillary tubes).

AZ9219 PSU 100 -240V~ 50/60Hz.

AZ9252 European Molded plug and lead set

AZ6746 USA Molded plug and lead set

AZ9165 UK Molded plug and lead set

AZ9258 Oven and Arm assembly

AZ9262 Thumb nut small (Black)

AZ9263 Thumb nut large (Black)

AZ9260 Keypad

AZ9264 LED oven illumination

APPENDIX 'A'. DECONTAMINATION CERTIFICATE.

Bibby Scientific Limited. Beacon Road, Stone, Staffordshire ST15 0SA. Great Britain Tel: +44(0)1785 812121. Fax: +44(0)1785 810405 E-mail: electrothermalhelp@bibby-scientific.com **DECONTAMINATION CLEARANCE CERTIFICATE** For the Inspection, Repair or Return of Medical, Laboratory or Industrial Equipment. Prior to a Service Engineer working on equipment that has been in an environment where substances hazardous to health may have been used, you are requested to provide the following information: **CUSTOMER DETAILS** Company:-Address:-Department:-Contact Name:-Tel No:-Fax No:-Post Code:-**Product Description** Model No:-Serial No:-Has the equipment been exposed to any of the following, Please answer all questions by deleting YES/NO as applicable and by providing details in section 2 below. A. Blood, body fluids, Pathological YES/NO Provide details if YES Specimens. B. Biodegradable material that could YES/NO Provide details if YES become a hazard. C. Other biohazard. YES/NO Provide details if YES D. Chemical or substances hazardous to YES/NO Provide details if YES Health. Provide details if YES E. Radioactive substances State name(s) YES/NO and quantities of isotopes and checks made for residual activity. F. Other hazards. YES/NO Provide details if YES 2. Please provide details of any hazard present as indicated above. Include details of names and quantities of agents as appropriate:-3. Your method of decontamination (please describe):-4. Are there likely to be any areas of residual contamination. (Please specify). I declare that the above information is true and complete to the best of my knowledge and belief. Authorized signature:-Name (please print):-Title/Position:-For and behalf of:-Date:-

12. NOTES

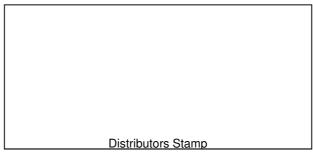
13. EC DECLARATION OF CONFORMITY

CE marked products and associated accessories covered by this Instruction book conform to the essential requirements of the following directives:

EMC Directive.

Low Voltage Directive.

A full copy of the EC Declaration / Conformity document can be obtained from the manufacture at the email address <code>info@bibby-scientific.com</code>



Bibby Scientific Limited. Beacon Road, Stone, Staffordshire ST15 0SA, Great Britain.

Tel: +44(0)1785 812121 Fax: +44(0)1785 810405

- General enquiries : info@bibby-scientific.com
- Order enquiries : sales@bibby-scientific.com
- Technical support : <u>electrothermalhelp@bibby-</u> <u>scientific.com</u>
- www.electrothermal.com

For the America's and Canada, contact: Techne Incorporated, 3 Terri Lane, Suite 10 Burlington, NJ 08016 USA.

Toll free:800-225-9243Tel: 609-589-2560

Fax: 609-589-2571

Email: <u>labproducts@techneusa.com</u>
Http www.techneusa.com

MEL-TEMP ® is a registered trade mark of Bibby Scientific.

Part of the Bibby Scientific Group



© 2013 Bibby Scientific Limited. All rights reserved.

Page 28 of 28 MEL-TEMP M8160 Issue 2.3