1977 No. 175

CONSUMER PROTECTION

Oil Heater (Safety) Regulations (Northern Ireland) 1977

Made . . . . . *23rd June* 1977

Coming into operation in accordance with Regulation 1(2)

To be laid before Parliament under paragraph 3(3) *of Schedule* 1 *to the Northern Ireland Act* 1974

ARRANGEMENTS OF REGULATIONS

The Department of Commerce, after consultation with such persons and bodies of persons as appear to it to be requisite, in exercise of the powers conferred on it by sections 1 and 2(4) and (5) of, and paragraph 3 of the Schedule to, the Consumer Protection Act (Northern Ireland) 1965(a) and now vested in it(b) and of every other power enabling it in that behalf, hereby makes the following regulations:—

(a) 1965 c. 14 (N.I.)
(b) by S.R. & O. (N.I.) 1973 No. 504 Art. 5(*c*) (II, p. 2992)

Citation and commencement

1.—(1) These regulations may be cited as the Oil Heater (Safety) Regulations (Northern Ireland) 1977.

(2) These regulations, with the exception of regulation 4(2), in relation to goods sold by, or in the possession for the purpose of selling of, the manufacturer or importer into Northern Ireland of those goods, shall come into operation on 1st August 1977 and, in any other case, shall come into operation on 1st January 1978.

(3) Regulation 4(2) shall come into operation on 1st October 1980.

Interpretation

2.—(1) In these regulations—

"the Act" means the Consumer Protection Act (Northern Ireland) 1965;

"the British Standard Specification of 1974" means the British Standard Specification for Kerosene (Paraffin) Unflued Space Heaters, Cooking and Boiling Appliances for Domestic Use BS 3300: 1974, published on 30th September 1974;

"barometric feed oil heater" means an oil heater which depends upon atmospheric pressure to retain the fuel in its fuel container;

"floor", except in regulation 22, means a rigid plane surface within two degrees of horizontal;

"full fuel level" in relation to an oil heater means the level marked on the heater as the maximum to which it may be properly filled with fuel or, where no such level is marked, the highest level to which the heater can be filled with fuel without overflowing when it is standing on a floor;

"long-drum burner" means a burner fitted with a flue or chimney to induce the flow of air for combustion;

"oil heater" means an appliance suitable for use in any dwelling and designed for the heating of space by means of the burning of kerosene within the meaning of Chapter 27 in Section V of the Annex to Council Regulation (EEC) No. 3000/75(c) (commonly called paraffin), not being an appliance designed for use with a flue for the removal into the open air, either directly or by connection with another flue or flues, of gases produced by the burning of kerosene;

"pressure heater" means an oil heater which requires for its proper operation any pressure in its fuel container greater than atmospheric pressure;

"self-extinguishing facility" means a device or other provision to extinguish the flame of an oil heater if the heater is overturned when alight;

"short drum burner" means a burner other than a long-drum burner and the burner of a pressure heater;

"wick-fed burner" means a burner to which the fuel is lifted from the fuel container by a wick; and

"working surface" includes the radiating surfaces and guard of a radiant oil heater, that part of any case which acts as a screen round a short drum burner, the outlet grille of a convector oil heater and the cylinder and top of a portable cylindrical oil heater fitted with a long drum burner.

(c) O.J. No. L.304, 24.11.75, p. 1

(2) Any reference in these Regulations to any requirement of or test specified in the British Standard Specification of 1974 includes a reference to any requirement or test incorporated in that Specification by reference to one or more other British Standard Specifications.

(3) For the purposes of these Regulations any reference to a British Standard Specification (other than the British Standard Specification of 1974) shall be construed as a reference to that Specification as amended before 30th September 1974.

(4) For the purposes of these Regulations, references in Appendix C to the British Standard Specification of 1974 to the filling of the fuel container of an oil heater to the full capacity indicated by the maker shall, in a case where no such indication is given, be taken to be a reference to filling to the full fuel level; and that Appendix shall be construed and applied accordingly.

Tests

3. For the purposes of any test of an oil heater pursuant to these Regulations—

(*a*) the fuel used shall comply with the appropriate requirements of Appendix A to the British Standard Specification of 1974 and, in these Regulations, "fuel" shall be construed accordingly,

(*b*) the conditions under which the test is carried on shall comply with the requirements of Appendix B to that Specification and

(*c*) the heater shall be filled, lit and adjusted as specified in Appendix C to that Specification.

Warnings and instructions

4.—(1) An oil heater shall bear a warning—

(*a*) against using petrol as a fuel;

(*b*) against carrying the heater when alight;

(*c*) against using the heater in an unventilated place;

(*d*) against using the heater where it may be exposed to draughts; and

(*e*) (except in the case of an oil heater having a fuel container which cannot be filled without being removed from the heater) against filling when alight.

(2) The warnings specified in paragraph (1) shall be distinguished by the word "Warning" or the word "Caution" or some other expression indicating that the warning is given for the purpose of safety.

(3) A self-extinguishing oil heater shall bear instructions about any necessary periodical or other attention needed to maintain or restore its self-extinguishing capability.

(4) The warnings and instructions required by this regulation shall be set out in legible and durable characters and displayed either upon the heater itself or upon a durable label stoutly affixed to it.

General provisions

5.—(1) An oil heater shall be of good construction, sound materials and adequate strength.

(2) No part of an oil heater in which a crack or distortion might affect its proper working shall be made of drawn brass unless any stress caused by the process of drawing and capable of causing such a crack or distortion is eliminated.

(3) If it is necessary for its safe operation that it should be levelled, an oil heater shall include a device for levelling it.

Fuel containers

6.—(1) In the case—

(*a*) of an oil heater fitted with a wick-fed burner, any join in the fuel container below the full fuel level shall be firmly joined so as to be fuel tight; and

(*b*) of a barometric feed oil heater, any join in the fuel container shall be firmly joined so as to be air and fuel tight.

(2) The fuel container of a barometric feed oil heater shall not have any soft solder joints and shall be sufficiently rigid to prevent the discharge of fuel or vapour due to distortion of the container.

(3) In the case—

(*a*) of an oil heater fitted with a wick-fed burner, any part of the fuel container which is less than 25mm measured vertically from the inside of the container at its deepest point when the oil heater is standing on a floor, and

(*b*) of a barometric feed oil heater, the fuel container, shall be made of, or shall be coated internally with, a material which is resistant to corrosion by ionisable compounds in any water present in the container and which is not liable to soften or otherwise deteriorate through exposure to kerosene.

Fuel system

7. Where the burner is not mounted immediately on top of the fuel container, any join in the fuel system of an oil heater which may in normal use be exposed at the same time to both fuel and air shall be fuel tight and shall be appropriate to the conditions under which the joint will operate in normal use.

Stability of heaters

8. An oil heater designed to stand on a floor—

(*a*) shall be so constructed that, when it is standing unsecured on a floor and whether it is full or empty of fuel, it can be tilted to an angle of fifteen degrees from the vertical in any direction without overturning; and

(*b*) shall have screw holes, a hook and chain or other means conveniently placed and sufficient for securing it so as to prevent it from being overturned.

Safety in overturning

9.—(1) An oil heater other than one designed to operate only when fixed to a rigid support shall have a self-extinguishing facility.

(2) Any self-extinguishing facility shall be so designed and of such materials that—

(*a*) its operation shall not become impaired by corrosion during the normal life of the heater;

(*b*) it will not require attention more often than at monthly intervals;

(*c*) if it requires attention at any time, it embodies a means of indicating that its condition is such that there is a risk of its being ineffective; and

(*d*) if it is tested in accordance with the tests specified in Parts 1 and 2 of Appendix K to the British Standard Specification of 1974—

(i) the flame of the heater will be extinguished within fifteen seconds after the heater is overturned,

(ii) no flame will appear outside the working surface during the tests;

(iii) the winceyette referred to in that Appendix will not catch fire during the tests; and

(iv) after the flame of the heater has been extinguished, it will not re-ignite spontaneously.

Spilling of fuel

10.—(1) An oil heater other than one designed to operate only when fixed to a rigid support shall be so constructed that, if it is tested in accordance with the tests specified in Part 3 of Appendix K to the British Standard Specification of 1974, any fuel which may escape from the heater during the first fifteen seconds after the heater is overturned, will not exceed the product of 55ml and the number of the heater's burners.

(2) The volume of any fuel which may escape from the heater shall be calculated in the manner specified in Part 3 of the said Appendix K.

Flame regulator

11. Any device for regulating the flame of an oil heater shall be readily accessible and capable of easy adjustment when the heater is alight and shall adjust the flame evenly.

Removable parts

12. Any part of an oil heater which is removed in the ordinary course of filling, cleaning or the replacing or trimming of the wick shall be so constructed that it cannot be fitted incorrectly, or an indication of its correct position in the heater shall be clearly marked on it or shall be clearly marked on another part of the heater near that position and in such a manner that the marking may be easily seen when the part is being replaced.

Pressure heaters

13.—(1) The fuel container of a pressure heater shall be so constructed that standing on a floor with any safety valve removed and with all its outlets (including any safety valve) sealed, it will withstand whichever is the greater of the three pressures specified in Part I of Schedule 1.

(2) The burner of a pressure heater shall be so constructed that with all its outlets (including any safety valve) sealed, it will withstand whichever is the greater of the three pressures specified in Part II of Schedule 1.

(3) Any metal-to-metal joint in any part of the burner of a pressure heater shall be soundly welded or brazed with high melting-point brazing metal and all such parts shall be so constructed that they may be readily fitted together in their correct positions.

(4) Any nipple of a pressure heater shall be readily accessible for pricking.

(5) There shall be fitted to the fuel container of a pressure heater a valve, which shall be readily and safely operable, for releasing quickly the pressure in the fuel container.

(6) A pressure heater shall be so constructed that when the heater is standing on a floor its fuel container cannot be filled beyond ninety-four per cent. of its capacity, measured to the base of the burner stem.

Emission of carbon monoxide

14. An oil heater shall be so constructed that, when it is burning at any rate at which it will burn normally, it will not emit more than one part by volume of carbon monoxide for every fifty parts of carbon dioxide.

Flame stability

15.—(1) An oil heater (other than a pressure heater) shall be capable of satisfying the test specified in the first paragraph of Appendix E to the British Standard Specification of 1974.

(2) An oil heater fitted with a short drum burner and a non-adjustable wick or kindler shall be capable of satisfying the tests specified in the second paragraph of the said Appendix E.

Fuel creep

16. An oil heater shall be so constructed that, when it is operated under normal conditions, no fuel may spread over any part of it so as to cause an increase in the size of the flame of the burner.

Flame creep

17. An oil heater shall be so constructed that, if it is filled, lit and adjusted as specified in Appendix C to the British Standard Specification of 1974, its flame will not increase in size at any time during the four hours following its final adjustment as specified in that Appendix.

Emission of smoke

18. An oil heater shall be so constructed that, if it is filled, lit and adjusted as specified in Appendix C to the British Standard Specification of 1974, its flame will not emit visible smoke at any time during a period ending when ninety per cent. of the fuel in its container has been consumed.

Surface temperature

19. An oil heater shall be so constructed that, if it is tested in accordance with the test specified in Appendix F of the British Standard Specification of 1974, the surface temperature of any part of the heater described in Schedule 2 will not exceed the limit specified in that Schedule in relation to that part: Provided that nothing in this regulation shall apply to any part of a heater which is a working surface.

Fuel temperature

20.—(1) An oil heater, other than a pressure heater with a sealed fuel container, shall be so constructed that, if it is filled up to its full fuel level and allowed to burn under normal conditions until ninety-five per cent. of the contents of the fuel container have been consumed, the temperature of the fuel remaining in the fuel container, determined in accordance with paragraph (2) shall not exceed 38°C in a room temperature of 16°C.

(2) For the purpose of paragraph (1) above, the temperature of the fuel remaining in the container of a barometric feed oil heater shall be the temperature of the fuel after it has been mixed and the temperature of fuel remaining in the container of any other heater shall be the temperature of the top 5mm of the fuel.

Operation under out-of-level conditions

21. An oil heater designed to stand on a floor shall be capable of satisfying the tests specified in clause 40 of the British Standard Specification of 1974.

Fire risk to walls and floors

22. An oil heater shall be so constructed that, if it is tested in accordance with the test specified in Appendix G to the British Standard Specification of 1974, no part of the floor or of the walls mentioned in paragraph 2 of that Appendix will during the test exceed in temperature 65°C in the case of a heater which radiates heat principally in one direction and 100°C in the case of any other heater.

Draught resistance

23. An oil heater shall be so constructed that it will satisfy each test specified in Schedule 3 which relates to it.

Flame flash-back

24.—(1) An oil heater designed to be operated with an adjustable wick shall be so constructed that, if it is filled, lit and adjusted as specified in Appendix C to the British Standard Specification of 1974, it shall not be possible by turning the wick down as far as it will go to cause the flame to ignite the fuel in the fuel container.

(2) The wick referred to in paragraph (1) above shall be a wick worn down to the lowest height which permits the heater to burn with a normal flame.

Automatic fuel supply regulators

25. An oil heater which is fitted with a device to regulate a supply of fuel automatically shall be so constructed that, notwithstanding any failure of the automatic operation of the device, there shall not as a result be any increase in the flow of fuel.

Goods already manufactured

26. As respects the requirements of these Regulations, subsections (1) and (2) of section 2 of the Act (which prohibit sales and possession for sale of goods and component parts not complying with regulations) shall apply in relation to goods and component parts manufactured before the imposition of these requirements notwithstanding anything in subsection (4) of that section (which exempts such goods and parts unless regulations otherwise provide).

Authorised testers

27. Any test of an oil heater or component part of an oil heater, being a test such as is referred to in paragraph 2 of the Schedule to the Act (which empowers a local authority to purchase goods for the purpose of a test), shall be carried out, at the expense of the local authority, by any such person or body as may be authorised by the Department of Commerce under this Regulation to carry out such a test.

Sealed with the Official Seal of the Department of Commerce for Northern Ireland on 23rd June 1977.

(L.S.) *W. T. McCrory*
Assistant Secretary

(Regulation 14(1) and (2))

SCHEDULE 1

Standards for pressure heaters

PART I

Pressure heater fuel container pressures

1. An internal pressure of 2.1 bar.

2. Any internal pressure capable of being produced by operating the pump connected to the container through sixty complete strokes in one minute with the container full to the full fuel level.

3. The lesser of the two pressures calculated in accordance with the formulae set out in Part III of this Schedule.

PART II

Pressure heater burner pressures

1. An internal pressure of 4.2 bar.

2. An internal pressure equal to any capable of being produced in the fuel container of the heater by operation of the pump in the manner described in Part I of this Schedule.

3. An internal pressure equal to the lesser of the two pressures calculated, in relation to the fuel container of the heater, in accordance with the formulae set out in Part III of this Schedule.

PART III

Formulae for calculating pressures

$$\text{Pressure 1 in bars} = \frac{1330 \times \text{the mechanical advantage}}{\text{the internal cross-sectional area of the pump in millimetres}}$$

$$\text{Pressure 2 in bars} = 1.03 \times \text{the compression ratio of the pump.}$$

In this Part of this Schedule "the mechanical advantage" means the factor by which the force applied to the pump handle is multiplied between the point at which the force is applied and the pump piston.

SCHEDULE 2 (Regulation 20)

Maximum surface temperatures

Column 1 *Description of part of oil heater*	*Column 2* *Maximum temperature Degrees Celsius*
Any part made of metal or of a material of a thermal conductivity not lower than that of steel and not higher than that of aluminium being a part which it may be necessary to touch in order to extinguish the heater or to adjust its flame or to move it ...	60
Any part made of a material whose thermal conductivity is substantially lower than that of steel, being a part such as is described above	85
Any part of the surface of a portable heater, being a part which is liable to be touched by accident ...	120

SCHEDULE 3 (Regulation 24)

Test for draught resistance

1. The oil heater shall be operated in accordance with the provisions of Appendix C to the British Standard Specification of 1974 in a wind tunnel constructed and operated in accordance with the provisions of Appendix J to that Specification.

2. After the heater has been finally adjusted as specified in Appendix C to the British Standard Specification of 1974 it shall be exposed for 5 minutes to a steady frontal horizontal draught at a velocity not exceeding 8 metres per second. During this 5 minute period not more than 10 flashes of flame shall appear outside the heater, none of which shall last as long as one second or exceed 50 millimetres in length.

3. If, in the case of a heater fitted with a short-drum burner, the flame is displaced during the 5 minute period specified in paragraph 2 of this Schedule so that the flame burns at the base of the heater, the heater shall be exposed to the draught specified in that paragraph for a further 30 minutes. During this further period no flame shall appear outside the heater.

4. After the end of the tests specified in paragraphs 2 and 3 the draught shall be stopped and the heater allowed to burn for 15 minutes. During this 15 minute period no flame shall appear outside the heater.

5. If during either of the tests specified in paragraphs 2 and 3 the flame is extinguished the draught shall be stopped immediately. During the following 15 minutes no flame shall appear outside the heater.

EXPLANATORY NOTE

(This note is not part of the Regulations, but is intended to indicate their general purport.)

These Regulations impose revised safety requirements for domestic unflued oil heaters based on the provisions of British Standard 3300: 1974.

Regulation 4 relates to warnings to be borne by oil heaters. Regulations 5 to 25 relate to the construction, design and performance of oil heaters, including provisions relating to stability, spillage of fuel on overturning, emission of carbon monoxide and smoke, surface temperature, operation when out of level, fire risk to surroundings and performance in a draught. Regulation 9 comprises new requirements relating to self-extinguishing facilities which are to be provided for any oil heater except one designed to operate only when fixed to rigid support.

British Standard 3300: 1974, to which reference is made in the Regulations, may be obtained from the British Standards Institution, 2 Park Street, London W1Y 4AA.