
STATUTORY INSTRUMENTS

1986 No. 1951

HEALTH AND SAFETY

The Road Traffic (Carriage of Dangerous Substances in Packages etc.) Regulations 1986

Made - - - 17th November 1986

Laid before Parliament 27th November 1986

Coming into Operation

for all regulations except regulation 7 — 6th April 1987

for regulation 7 — 6th April 1988

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[DET 5624]

The Secretary of State for Transport, in exercise of the powers conferred by sections 15(1), (2), (3)(a) and (c), (4), (5)(b), and (6)(a) and (b) and 82(3)(a) of, and paragraphs 1(1), (2), (3) and (4), 3, 9, 12, 14, 15(1) and 16 of Schedule 3 to, the Health and Safety at Work etc. Act 1974(a) (“the 1974 Act”), and of all other enabling powers, for the purpose of giving effect without modifications to proposals submitted to him by the Health and Safety Commission under section 11(2)(d) of the 1974 Act after the carrying out by the said Commission of consultations in accordance with section 50(3) of that Act, hereby makes the following Regulations: —

Citation and commencement

1. These Regulations may be cited as the Road Traffic (Carriage of Dangerous Substances in Packages etc.) Regulations 1986 and shall come into operation on 6th April 1987, except regulation 7 which shall come into operation on 6th April 1988.

Interpretation

2.—(1) In these Regulations, unless the context otherwise requires—

“approved list” has the same meaning as in regulation 4 of the Classification, Packaging and Labelling of Dangerous Substances Regulations 1984(b);

“classified” means classified in accordance with regulation 6(4) of the Classification, Packaging and Labelling of Dangerous Substances Regulations 1984;

“consignor” means a person who consigns (whether as principal or as agent for another) a dangerous substance for carriage by road;

“carriage” shall be construed in accordance with regulation 3(3);

“dangerous substance” (whether or not a substance which is a preparation or other mixture) means—

- (a) any substance, listed in Part 1A2 of the approved list, which is specified to be in packing group I or II in column 7 of that Part;
- (b) any substance, which, although not listed in Part 1A2 of the approved list, is classified as being in one of the groups of substances listed in Part 1B of the approved list and is specified to be in packing group I or II in column 7 of that Part;
- (c) any substance which is specified in column 6 of Part 1A2 of the approved list as a flammable gas, a toxic gas or an organic peroxide;
- (d) any flammable gas, toxic gas or organic peroxide other than one listed in Part 1A2 of the approved list;
- (e) asbestos in any form listed in Part 1A2 of the approved list;
- (f) asbestos waste designated as “special waste” by regulation 2(1) of the Control of Pollution (Special Waste) Regulations 1980(c);

(a) 1974 c.37; section 15 was amended by the Employment Protection Act 1975 (c.71), Schedule 15, paragraph 6.

(b) S.I. 1984/1244, as amended by S.I. 1986/1922.

(c) S.I. 1980/1709.

(g) any substance listed in Part 1A2 of the approved list as hazardous waste other than hazardous waste, flammable liquid, flash point 21°C to 55°C;

(h) any other substance which, although not listed in Part 1A2 of the approved list, has, when classified, the properties of a substance specified in Schedule 1, but does not include a substance carried at such dilution or otherwise treated so that it no longer has the properties of any flammable gas, organic peroxide, toxic gas or any substance in Schedule 1;

“flammable gas” means a gas so classified;

“flash point” has the same meaning as in regulation 2(1) of the Classification, Packaging and Labelling of Dangerous Substances Regulations 1984;

“freight container” means a container as defined in regulation 2(1) of the Freight Containers (Safety Convention) Regulations 1984(a);

“operator” means in relation to a vehicle carrying a dangerous substance —

(a) a person who holds, or is required by section 60 of the Transport Act 1968(b) to hold, a licence for the use of that vehicle for the carriage of goods on a road; or

(b) where no such licence is required, the keeper of the vehicle;

“organic peroxide” means a substance so classified;

“packing group” means —

(a) in the case of a substance listed as dangerous for conveyance in Part 1A2 or Part 1B of the approved list, the packing group (if any) specified for that substance in column 7; or

(b) in the case of a dangerous substance not so listed, the packing group specified for that substance in column 2 of Schedule 1;

“receptacle” means a vessel, or the innermost layer of packagings, which is in contact with a dangerous substance and which is liable to be individually handled when the substance is used or disposed of;

“road” means —

(a) as respects England and Wales, a road within the meaning of section 196(1) of the Road Traffic Act 1972(c);

(b) as respects Scotland, a road within the meaning of the Roads (Scotland) Act 1984(d);

“toxic gas” means a gas so classified.

(2) For the purposes of these Regulations —

(a) a combination of a motor vehicle and one or more trailers shall be treated as one vehicle for so long as they remain attached; and

(a) S.I. 1984/1890.

(b) 1968 c.73.

(c) 1972 c.20.

(d) 1984 c.54.

- (b) a reference to the carriage by road of a dangerous substance in bulk shall be treated as a reference to the carriage of that substance when it is —
 - (i) carried in or on the vehicle or in a freight container; and
 - (ii) not in a receptacle.
- (3) Unless the context otherwise requires, any reference in these Regulations to —
 - (a) a numbered regulation or Schedule is a reference to the regulation or Schedule in these Regulations so numbered; and
 - (b) a numbered paragraph is a reference to the paragraph so numbered in the regulation or Schedule in which the reference appears.

Application of these Regulations

3.—(1) Regulation 13 shall apply in relation to the carriage of any quantity of a dangerous substance, and, subject to paragraph (2), the remainder of these regulations shall apply in relation to the carriage of —

- (a) any quantity of a dangerous substance in bulk;
- (b) any quantity of any organic peroxide or any flammable solid (irrespective of its packing group if any) which is subject to the provisions of regulation 10(2) or 10(3);
- (c) any organic peroxide (other than one specified in sub-paragraph (b) above) or any flammable or toxic gas or any dangerous substance allocated to packing group I in the approved list or in Schedule 1, in a receptacle with a capacity of 5 litres or more;
- (d) asbestos or any asbestos waste which is a dangerous substance (irrespective of its packing group), in a receptacle with a capacity of 5 litres or more;
- (e) any dangerous substance listed in the approved list as “hazardous waste” which is designated as “special waste” by regulation 2(1) of the Control of Pollution (Special Waste) Regulations 1980, in a receptacle with a capacity of 5 litres or more;
- (f) any other dangerous substance, in a receptacle with a capacity of 200 litres or more.

(2) These Regulations shall not apply —

- (a) where either —
 - (i) the Dangerous Substances (Conveyance by Road in Road Tankers and Tank Containers) Regulations 1981(a) apply, or
 - (ii) the carriage is specified in sub-paragraphs (a) to (g) of regulation 3(1) of those Regulations (which provides for exceptions from the Regulations in certain cases);

(a) S.I. 1981/1059.

- (b) in so far as the substance is used solely in connection with the operation of the vehicle;
- (c) where the substance being carried by road is a radioactive substance within the meaning of regulation 2(1) of the Ionising Radiations Regulations 1985(a);
- (d) where the substance being carried by road is an explosive of Class 1 within the meaning of regulation 2(1) of the Classification and Labelling of Explosives Regulations 1983(b);
- (e) where —
 - (i) the vehicle carrying the dangerous substance is engaged in an international transport operation within the meaning of the Convention concerning International Carriage by Rail (COTIF)(c) as revised or re-issued from time to time, and
 - (ii) such carriage conforms in every respect to the provisions of the Uniform Rules concerning the Contract for International Carriage of Goods by Rail (CIM) which forms Appendix B to that Convention and to the Regulations (RID) made thereunder;
- (f) where the vehicle carrying the dangerous substance —
 - (i) is engaged in an international transport operation within the meaning of the European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) signed at Geneva on 30th September 1957, as revised or re-issued from time to time,
 - (ii) complies with the conditions contained in Annexes A and B to that Agreement, and
 - (iii) is certified pursuant to that Agreement as complying with it,

or where by a provision of that Agreement the transport operation is subject to a special bilateral or multilateral agreement under the terms of Article 4 of that Agreement to which the United Kingdom is a Contracting Party;
- (g) where the vehicle carrying the dangerous substance is not, for the time being, subject to the provisions of the said European Agreement by reason only that it is a vehicle belonging to or under the orders of the armed forces of a Contracting Party;
- (h) where the vehicle is a vehicle which is only used on roads for delivering goods between private premises and a vehicle in the immediate vicinity of those premises or in passing from one part of such premises to another in the immediate vicinity;
- (i) where the vehicle is carrying a dangerous substance by road from one part of an agricultural unit to another part of that unit, and the dangerous substance is diluted ready for use or is otherwise in a condition ready for

(a) S.I. 1985/1333.

(b) S.I. 1983/1140.

(c) Cmnd. 8535.

use; and in this sub-paragraph “agricultural unit” means land which is occupied as a unit for agriculture, including horticulture, fruit growing, seed growing, dairy farming, livestock breeding and keeping, forestry, the use of land as grazing land, meadow land, osier land, market gardens and nursery grounds, and the preparation of land for agricultural purposes;

- (j) where the vehicle in which the substance is being carried by road is not a goods vehicle and is not being used for or in connection with work;
- (k) to any substance specified in sub-paragraphs (c) to (i) of regulation 3(1) of the Classification, Packaging and Labelling of Dangerous Substances Regulations 1984;
- (l) where the substance being carried is commercial butane, commercial propane or any mixture thereof in a cylinder and is being carried —
 - (i) in connection with the operation of a vehicle designed for a purpose which includes the use of such substance; or
 - (ii) as part of equipment carried on that vehicle and, if that equipment has only one cylinder, in one spare cylinder.

(3) A vehicle shall be deemed for the purposes of these Regulations to be used for the carriage of a dangerous substance from the commencement of loading for the purpose of carrying the substance on a road until the vehicle has been unloaded and where necessary has been cleaned so that any of the substance which remains on or in the vehicle is not sufficient to create a risk to the health or safety of any person, whether or not the vehicle is on a road at the material time.

Construction of vehicles and freight containers

4. An operator shall not carry a dangerous substance by road unless any vehicle and any freight container in which the substance is carried —

- (a) is properly designed, of adequate strength and of good construction from sound and suitable materials and adequately maintained;
- (b) is suitable for the purpose for which it is being used, having regard to —
 - (i) the nature and circumstances of the journey being undertaken, and
 - (ii) the characteristic properties and quantity of the dangerous substance and of all other substances being carried (including any which are not in themselves dangerous); and
- (c) in the case of substances which are carried in bulk, any parts of the vehicle or freight container in which the substance is carried and any fittings attached thereto, in so far as they are likely to come into contact with the dangerous substance, are made of materials which are neither liable to be affected by the substance nor liable, in conjunction with the substance, to form any other substance which creates a hazard to the health or safety of any person.

Information relating to a dangerous substance to be obtained by the operator

5.—(1) An operator shall not carry a dangerous substance unless he has obtained from the consignor of that substance or some other person acting on his behalf such information as will enable the operator to —

- (a) comply with the requirements of these Regulations; and
- (b) be aware of the hazards created by the substance to the health or safety of any person.

(2) It shall be the duty of the consignor to provide the information required by paragraph (1), or to arrange for its provision, and to ensure that the information is accurate and sufficient for the purposes of that paragraph.

Information in writing to be available during carriage

6.—(1) Where a dangerous substance is carried, the operator of the vehicle used for carrying the substance shall ensure that the driver thereof receives such information in writing in relation to the substance as will enable him to know —

- (a) the identity of the substance; and
- (b) the nature of the hazards created by the substance and the action to be taken in an emergency.

(2) The driver of a vehicle to which this regulation applies shall ensure that —

- (a) the information in writing received under paragraph (1) is kept on the vehicle and is readily available at all times while the substance is being carried; and
- (b) the information in writing relating to any substance which is not being carried at that time is destroyed, or removed from the vehicle, or placed in a securely closed container clearly marked to show that the information does not relate to a substance then being carried.

Instruction and training for drivers

7.—(1) The operator of a vehicle used for the carriage of a dangerous substance shall ensure that the driver of that vehicle has received adequate instruction and training to enable him to understand —

- (a) the nature of the hazards created by the substance being carried and the action to be taken in an emergency; and
- (b) his duties under these Regulations.

(2) Where the vehicle is carrying a total load of —

- (a) 3 tonnes or more of a dangerous substance or substances —
 - (i) in bulk, or
 - (ii) in receptacles of such size that this regulation will apply to the carriage of the substance in those receptacles by virtue of regulation 3(1); or
- (b) any quantity of a substance or substances to which regulation 10(2) or (3) applies,

the operator shall keep a record of such instruction and training received by the driver whilst in his employment, and a copy of that record shall be made available to the driver.

Loading, stowage and unloading of dangerous substances

8. The operator and any person engaged in the carriage of a dangerous substance shall take such steps as it is reasonable for persons in their positions to take to ensure that nothing in the manner in which the dangerous substance is loaded onto, stowed on or unloaded from the vehicle is liable to create a hazard to the health or safety of any person.

Precautions against fire or explosion

9. Every person engaged in the carriage of a dangerous substance shall take all the precautions necessary for preventing fire or explosion.

Limitation on the carriage of certain dangerous substances

10.—(1) The operator shall ensure that where a maximum concentration or some other condition is specified for a substance in column 1 of the approved list, that substance shall not be carried except at a concentration equal to or below the maximum concentration or, as the case may be, in accordance with the condition so specified.

(2) Subject to paragraph (3), where a vehicle is used for the carriage of an organic peroxide or a flammable solid which in either case has a self-accelerating decomposition temperature of 50°C or below as packaged, the operator shall ensure that adequate means are provided to maintain that organic peroxide or that flammable solid below its self-accelerating decomposition temperature at all times while it is being carried.

(3) The operator and driver shall ensure that —

- (a) at all times that an organic peroxide specified in column 1 of Schedule 2 is being carried, that organic peroxide is kept at a temperature which does not exceed the temperature specified for that organic peroxide in column 2 of that Schedule; and
- (b) at all times that a flammable solid specified in column 1 of Schedule 3 is being carried, that flammable solid is kept at a temperature which does not exceed the temperature specified for that flammable solid in column 2 of that Schedule.

(4) In this regulation —

“self-accelerating decomposition temperature” means the lowest temperature at which self-accelerating decomposition may occur in the package during carriage.

Marking of vehicles carrying dangerous substances

11.—(1) Subject to paragraph (2), where a vehicle is being used for the carriage of a total quantity of 500 kilograms or more of one or more dangerous substances in bulk or in receptacles in circumstances in which these Regulations apply,

the operator shall ensure that the vehicle displays two rectangular reflectorised orange-coloured plates of 400 millimetres base and 300 millimetres high, set in a substantially vertical plane, which —

- (a) have a black border not more than 15 millimetres wide;
- (b) are affixed one at the front and the other at the rear of the vehicle; and
- (c) are clearly visible.

(2) The operator and driver of any vehicle which is required under this regulation to display a sign specified in paragraph (1) shall ensure that any such sign is —

- (a) displayed at all times as required by these Regulations;
- (b) when displayed is kept clean and free from obstruction; and
- (c) only displayed on a vehicle which is, for the time being, used for the carriage of a dangerous substance.

(3) The foregoing paragraphs of this regulation shall not apply —

- (a) to the carriage of a dangerous substance in a receptacle or in bulk to a port for carriage by sea, or from a port having been carried by sea, if the vehicle or any freight container on the vehicle is placarded in accordance with the appropriate provisions of the International Maritime Dangerous Goods Code issued by the International Maritime Organisation as revised or re-issued from time to time; or
- (b) where the vehicle is being used solely for carriage of a dangerous substance from —
 - (i) another road vehicle which has been damaged as the result of an accident on a road or has broken down on a road, or
 - (ii) a rail vehicle which has been damaged or derailed or has broken down on a railway other than a siding on which it was loaded;
- (c) where a trailer has been separated from its motive unit, except that the operator and driver of the vehicle shall ensure that a sign specified in paragraph (1) is displayed on the rear of such a trailer while it contains 500 kilograms or more of one or more dangerous substances.

(4) The foregoing paragraphs of this regulation shall not apply to the carriage of a dangerous substance in a vehicle which is in the service of the armed forces of the Crown or of visiting forces whilst the vehicle carrying that substance is being used —

- (a) on manoeuvres within such limits and during such periods as may from time to time be specified by Order in Council under the Manoeuvres Act 1958(a); or

(a) 1958 (7 & 8 Eliz. 2) c.7.

(b) on training —

- (i) which has been certified by the appropriate Home Forces or visiting forces authority, as defined in the Road Vehicles Lighting Regulations 1984(a), as training on a special occasion pursuant to regulation 7(1)(a) of those Regulations; and
- (ii) of which notice has been given by that authority to the chief officer of police and to the chief fire officer of every area in which that training is to take place at least 48 hours before the commencement of that training.

Supervision of vehicles containing dangerous substances

12. Where the vehicle is carrying a total load of —

(a) 3 tonnes or more of a dangerous substance or substances —

- (i) in bulk, or
- (ii) in receptacles of such size that this regulation will apply to the carriage of the substance in those receptacles by virtue of regulation 3(1); or

(b) any quantity of a substance or substances to which regulation 10(2) or (3) applies,

the driver of that vehicle shall ensure that, when not being driven, it is —

- (i) parked in a safe place; or
- (ii) supervised at all times by him or by some other competent person over the age of 18 years.

Information to be given to police officers and Department of Transport traffic examiners

13.—(1) A driver shall on request give to any police officer or traffic examiner any documents required to be carried under these Regulations and such other information in his possession as will enable that person to know the identity and quantity of dangerous substances being carried.

(2) In this regulation —

“traffic examiner” means a goods vehicle examiner within the meaning of section 56(1) of the Road Traffic Act 1972.

Defence in proceedings for contravening these Regulations

14. In any proceedings for an offence under these Regulations, it shall be a defence for any person to prove that he took all reasonable precautions and exercised all due diligence to avoid the commission of that offence.

Exemption certificates

15.—(1) Subject to paragraph (2), the Health and Safety Executive may, by a certificate in writing, exempt any person or class of persons, or dangerous substance, or class of dangerous substances, from all or any of the requirements

(a) S.I. 1984/812.

or prohibitions imposed by these Regulations and any such exemption may be granted subject to conditions and to a limit of time and may be revoked at any time by a certificate in writing.

(2) The Executive shall not grant any such exemption unless, having regard to the circumstances of the case, and in particular to —

- (a) the conditions, if any, which it proposes to attach to the exemption; and
- (b) any other requirements imposed by or under any enactments which apply to the case,

it is satisfied that the health and safety of persons who are likely to be affected by the exemption will not be prejudiced in consequence of it.

Revocations and modifications

16.—(1) The Orders and Regulations specified in column 1 of Part I of Schedule 4 are hereby revoked to the extent specified in the corresponding entry in column 3.

(2) The enactments and instruments specified in Part II of Schedule 4 shall be modified to the extent specified in that Schedule.

John Moore,
Secretary of State for Transport.

17th November 1986.

SCHEDULE 1

Regulation 2(1)

DANGEROUS SUBSTANCES

PART I

SPECIFICATION AND GROUPS OF DANGEROUS SUBSTANCES

Column 1 Specification	Column 2 Packing Group
<p><i>Flammable Liquid</i> A liquid with a flash point of less than 21°C and which—</p> <p>(a) has an initial boiling point of 35°C and below; or</p> <p>(b) has an initial boiling point above 35°C.</p>	<p>I</p> <p>II</p>
<p><i>Flammable Solid</i> A solid which is readily combustible under conditions encountered in carriage in packages etc. or which may cause or contribute to fire through friction (including any self-reactive flammable solid) and which —</p> <p>(a) is normally water-wetted and which when in a dry state would be classed as an explosive under the Classification and Labelling of Explosives Regulations 1983; or</p> <p>(b) can be ignited readily or which when ignited burns very vigorously or intensely and is difficult to extinguish.</p>	<p>I</p> <p>II</p>
<p><i>Spontaneously combustible substance</i> A substance which is liable to spontaneous heating under conditions encountered in carriage or to heating in contact with air, and being then liable to catch fire, and which —</p> <p>(a) is a pyrophoric substance which ignites instantly on contact with air; or</p> <p>(b) is any other substance which is liable to ignite on contact with air, particularly under conditions of spillage.</p>	<p>I</p> <p>II</p>
<p><i>Substance which in contact with water emits flammable gas</i> A substance which in contact with water is liable to become spontaneously combustible or to give off a flammable gas, and which —</p> <p>(a) either reacts vigorously with water at ambient temperatures and demonstrates generally a tendency for the gas produced to ignite in the presence of water or moisture, or which reacts readily with water at ambient temperatures and has a minimum rate of gas evolution over any one minute of 500 millilitres per gram; or</p> <p>(b) reacts readily with water at ambient temperatures, such that the maximum rate of gas evolution over any one day is equal to or greater than 500 millilitres per gram.</p>	<p>I</p> <p>II</p>
<p><i>Oxidizing Substance</i> A substance, other than an organic peroxide, which, although not itself necessarily combustible, may by yielding oxygen or by a similar process cause or contribute to the combustion of other material, and which exhibits oxidizing properties to a greater degree than —</p> <p>(a) sodium chlorate; or</p> <p>(b) sodium nitrate.</p>	<p>I</p> <p>II</p>

Column 1 Specification	Column 2 Packing Group
<p><i>Toxic Substance</i> A substance known to be so toxic to man as to afford a hazard to health during carriage or which in the absence of adequate data on human toxicity is presumed to be toxic to man and which is allocated to group I or group II in accordance with the criteria set out in Part II of this Schedule.</p>	—
<p><i>Corrosive Substance</i> A substance which by chemical action will—</p> <p>(a) cause severe damage when in contact with living tissue; or</p> <p>(b) materially damage other freight or equipment if leakage occurs,</p> <p>and which causes visible necrosis of the skin tissue at the site of contact when tested on the intact skin of an animal for a period of—</p> <p>(i) up to 3 minutes; or</p> <p>(ii) more than 3 and up to 60 minutes.</p>	<p>I</p> <p>II</p>

PART II

CRITERIA FOR ALLOCATION OF TOXIC SUBSTANCES INTO GROUPS

1. Account should be taken of human experience in instances of accidental poisoning and of special properties possessed by any individual substance, such as liquid state, high volatility, any special likelihood of penetration and special biological effects. In the absence of human experience, classification should be based on data obtained from animal experiments. Three possible routes of administration should be examined. These routes are exposure through oral ingestion, dermal contact, and inhalation of dusts, mists, or vapours. Appropriate animal tests covering the various routes of exposure are as follows:—
 - (a) LD₅₀ for acute oral toxicity: That dose of the substance administered which is most likely to cause death within 14 days in one half of both male and female young adult albino rats. The number of animals tested shall be sufficient to give a statistically significant result and be in conformity with good pharmacological practices. The result is expressed in milligrams per kilogram body weight;
 - (b) LD₅₀ for acute dermal toxicity: That dose of the substance which, administered by continuous contact for 24 hours with the bare skin of the albino rabbit, is most likely to cause death within 14 days in one half of the animals tested. The number of animals tested shall be sufficient to give a statistically significant result and be in conformity with good pharmacological practices. The result is expressed in milligrams per kilogram body weight;
 - (c) LC₅₀ for acute inhalation toxicity: That concentration of vapour, mist or dust which, administered by continuous inhalation to both male and female young adult albino rats for one hour, is most likely to cause death within 14 days in one half of the animals tested. If the substance is administered to the animals as a dust or mist, more than 90% of the particles available for inhalation in the test must have a diameter of 10 microns or less, provided that it is reasonably foreseeable that such concentrations could be encountered by man during carriage. The result is expressed in milligrams per litre of air for dust and mists or in millilitres per cubic metre of air (parts per million) for vapours.

2. When a substance exhibits a different order of toxicity by two or more routes of administration, the highest degree of danger indicated by the tests should be considered when classifying the substance.

3. Subject to paragraphs 1 and 2, toxic substances shall be allocated into groups I or II in accordance with the criteria given in the table below:

Classification	Group	Oral toxicity LD ₅₀ (mg/kg)	Dermal toxicity LD ₅₀ (mg/kg)	Inhalation toxicity of dusts or mists LC ₅₀ (mg/l)	Inhalation toxicity of vapours where V is the saturated vapour concentration pro- duced by the substance at 20°C expressed by reference to LC ₅₀ (ml/m ³)
Toxic substance	1	≤5	≤40	≤0.5	V ≥ 10.LC ₅₀ and LC ₅₀ ≤ 1000
	11	>5 to ≤50	>40 to ≤200	>0.5 to ≤2	V ≥ LC ₅₀ and LC ₅₀ ≤ 3000 but not placed in group 1

The above criteria are based on LC₅₀ data relating to one hour exposure and where such information is available it should be used. However, where only LC₅₀ data relating to 4 hour exposures is available then:

LC₅₀ (4 hr) X 4 shall be considered equivalent to LC₅₀ (1 hr) for dusts or mists, and
LC₅₀ (4 hr) X 2 shall be considered equivalent to LC₅₀ (1 hr) for vapours.

SCHEDULE 2

Regulation 10(3)(a)

ORGANIC PEROXIDES WHICH MUST NOT BE CARRIED ABOVE SPECIFIED TEMPERATURES

Column 1 Organic Peroxide	Column 2 Maximum Temperature
Acetyl cyclohexane sulphonyl peroxide, not more than 82% wetted with not less than 12% water	-10°C
Acetyl cyclohexane sulphonyl peroxide, not more than 32% in solution	-10°C
<i>tert</i> -Amyl peroxy-2-ethylhexanoate, technically pure	+20°C
<i>tert</i> -Amyl peroxyneodecanoate, not more than 75% with phlegmatiser	0°C
<i>tert</i> -Amylperoxy-pivalate, not more than 77% in solution	+10°C
<i>tert</i> -Butyl peroxydiethylacetate, technically pure	+20°C
<i>tert</i> -Butyl peroxy-2-ethylhexanoate, technically pure	+20°C
<i>tert</i> -Butyl peroxy-2-ethylhexanoate, not more than 50% with phlegmatiser	+35°C
<i>tert</i> -Butyl peroxy-2-ethylhexanoate, not more than 30% with 2,2-Di(<i>tert</i> -butyl peroxy)butane, not more than 35% with not less than 35% phlegmatiser	+35°C
<i>tert</i> -Butyl peroxyisobutyrate, more than 52% but not more than 77% in solution	+15°C
<i>tert</i> -Butyl peroxyisobutyrate, not more than 52% in solution	+15°C
<i>tert</i> -Butyl peroxyneodecanoate, technically pure	-5°C
<i>tert</i> -Butyl peroxyneodecanoate, not more than 77% in solution	0°C
<i>tert</i> -Butyl peroxy-pivalate, more than 72% but not more than 77% in solution	0°C
<i>tert</i> -Butyl peroxy-pivalate, not more than 72% in solution	0°C

Column 1 Organic Peroxide	Column 2 Maximum Temperature
Cumyl peroxyneodecanoate, not more than 77% in solution	-10°C
Cumyl peroxyvalate, not more than 77% in solution	-5°C
Diacetone alcohol peroxides, not more than 57% in solution with not more than 9% hydrogen peroxide, not less than 26% diacetone alcohol and not less than 9% water; total active oxygen content, not more than 10%	+30°C
Diacetyl peroxide, not more than 27% in solution (dimethylphthalate or other approved phlegmatiser)	+20°C
Dibenzyl peroxydicarbonate, not more than 87% with water	+25°C
Di-(4- <i>tert</i> -butylcyclohexyl) peroxydicarbonate, technically pure	+30°C
Di-(4- <i>tert</i> -butylcyclohexyl) peroxydicarbonate, not more than 42%, stable dispersion, in water	+25°C
Di- <i>n</i> -butyl peroxydicarbonate, not more than 27% in solution	0°C
Di- <i>n</i> -butyl peroxydicarbonate, not more than 52% in solution	-15°C
Di- <i>sec</i> -butyl peroxydicarbonate, technically pure	-20°C
Di- <i>sec</i> -butyl peroxydicarbonate, not more than 52% in solution	-15°C
Dicetyl peroxydicarbonate, not more than 42%, stable dispersion, in water	+25°C
Dicetyl peroxydicarbonate, technically pure	+20°C
Dicyclohexyl peroxydicarbonate, technically pure	+5°C
Dicyclohexyl peroxydicarbonate, not more than 91% with water	+5°C
Didecanoyl peroxide, technically pure	+15°C
Di-2-ethylhexyl peroxydicarbonate, technically pure	-20°C
Di-2-ethylhexyl peroxydicarbonate, not more than 77% in solution	-15°C
Di-2-ethylhexyl peroxydicarbonate, not more than 42%, stable dispersion in water	-10°C
Diethyl peroxydicarbonate, not more than 27% in solution	-10°C
Diisobutyl peroxide, not more than 52% in solution	-20°C
Diisopropyl peroxydicarbonate, technically pure	-15°C
Diisopropyl peroxydicarbonate, not more than 52% in solution	-10°C
Diisotridecyl peroxydicarbonate, technically pure	-10°C
Di-(2-methylbenzoyl) peroxide, not more than 85% with water	+30°C
2,5-Dimethyl-2,5-di-(2-ethylhexanoylperoxy) hexane, technically pure	+20°C
Dimyristyl peroxydicarbonate, technically pure	+20°C
Dimyristyl peroxydicarbonate, not more than 42%, stable dispersion, in water	+10°C to +20°C depending on packaging
Di- <i>n</i> -nonanoyl peroxide, technically pure	0°C
Di- <i>n</i> -octanoyl peroxide, technically pure	+10°C
Diperoxy azelaic acid, not more than 27% with not less than 13% azelaic acid and not less than 53% sodium sulphate	+35°C
Diperoxy dodecane diacid, not more than 42% with not less than 56% sodium sulphate	+40°C

Column 1 Organic Peroxide	Column 2 Maximum Temperature
Dipropionyl peroxide, not more than 28% in solution	+15°C
Di- <i>n</i> -propyl peroxydicarbonate, technically pure	-25°C
Disuccinic acid peroxide, not more than 72% wetted with water	+10°C
Di-(3,5,5-trimethyl-1,2-dioxolanyl-3) peroxide, not more than 50% as a paste with phlegmatizer	+30°C
Di-(3,5,5-trimethylhexanoyl) peroxide, technically pure or Di-(3,5,5-trimethylhexanoyl) peroxide in solution	0°C
Methylcyclohexanone peroxide(s), not more than 67% in solution	+35°C
1,1,3,3-Tetramethylbutyl peroxy-2-ethylhexanoate, technically pure	+20°C
2,4,4-Trimethylpentyl-2-peroxy phenoxy acetate, not more than 37% in solution	-15°C

SCHEDULE 3

Regulation 10(3)(b)

FLAMMABLE SOLIDS WHICH MUST NOT BE CARRIED ABOVE
SPECIFIED TEMPERATURES

Column 1 Organic Peroxide	Column 2 Maximum Temperature
2,2'-Azodi-(2,4-dimethyl-4-methoxyvaleronitrile)	-5°C
2,2'-Azodi-(2,4-dimethylvaleronitrile)	+10°C
Azodiisobutyronitrile	+40°C
2,2'-Azodi-(2-methylbutyronitrile)	+40°C
4-Benzyl(ethyl)amino-3-ethoxybenzenediazonium zinc chloride	+40°C
4-Benzyl(methyl)amino-3-ethoxybenzenediazonium zinc chloride	+40°C
4-Dimethylamino-6-(2-dimethylaminoethoxy) toluene-2-diazonium zinc chloride	+40°C
3-(2-Hydroxyethoxy)-4-pyrrolidin-1-ylbenzenediazonium zinc chloride	+40°C

SCHEDULE 4

Regulation 16

REVOCATIONS AND MODIFICATIONS

PART I

REVOCATIONS

Column 1 Instrument Revoked	Column 2 Reference	Column 3 Extent of Revocation
The Petroleum (Inflammable Liquids and other Dangerous Substances) Order 1947	S.R.O. 1947/1443	The whole Order
The Petroleum-Spirit (Conveyance by Road) Regulations 1957	S.I. 1957/191	The whole Regulations
The Petroleum (Carbon Disulphide) Order 1958	S.I. 1958/257	The whole Order
The Carbon Disulphide (Conveyance by Road) Regulations 1958	S.I. 1958/313	The whole Regulations
The Petroleum-Spirit (Conveyance by Road) Regulations 1958	S.I. 1958/962	The whole Regulations
The Carbon Disulphide (Conveyance by Road) Regulations 1962	S.I. 1962/2527	The whole Regulations
The Petroleum-Spirit (Conveyance by Road) (Amendment) Regulations 1966	S.I. 1966/1190	The whole Regulations
The Petroleum (Carbon Disulphide) Order 1968	S.I. 1968/571	The whole Order
The Petroleum (Corrosive Substances) Order 1970	S.I. 1970/1945	The whole Order
The Corrosive Substances (Conveyance by Road) Regulations 1971	S.I. 1971/618	The whole Regulations
The Petroleum (Inflammable Liquids) Order 1971	S.I. 1971/1040	The whole Order
The Inflammable Liquids (Conveyance by Road) Regulations 1971	S.I. 1971/1061	The whole Regulations
The Inflammable Substances (Conveyance by Road) (Labelling) Regulations 1971	S.I. 1971/1062	The whole Regulations
The Petroleum (Organic Peroxides) Order 1973	S.I. 1973/1897	The whole Order
The Organic Peroxides (Conveyance by Road) Regulations 1973	S.I. 1973/2221	The whole Regulations
The Petroleum (Regulation) Acts 1928 and 1936 (Repeals and Modifications) Regulations 1974	S.I. 1974/1942	Regulation 4(2)

Column 1 Instrument Revoked	Column 2 Reference	Column 3 Extent of Revocation
The Petroleum (Consolidation) Act 1928 (Enforcement) Regulations 1979	S.I. 1979/427	Regulation 2(1)(a)(v) and 2(1)(a)(vii) to 2(1)(a)(xi); entries in the Schedule relating to the Petroleum-Spirit (Conveyance by Road) Regulations 1957, the Carbon Disulphide (Conveyance by Road) Regulations 1958, the Corrosive Substances (Conveyance by Road) Regulations 1971, the Inflammable Liquids (Conveyance by Road) Regulations 1971, the Inflammable Substances (Conveyance by Road) (Labelling) Regulations 1971 and the Organic Peroxides (Conveyance by Road) Regulations 1973
The Petroleum (Consolidation) Act 1928 (Conveyance by Road Regulations Exemptions) Regulations 1980	S.I. 1980/1100	The whole Regulations
The Dangerous Substances (Conveyance by Road in Road Tankers and Tank Containers) Regulations 1981	S.I. 1981/1059	The entries in Schedule 5 relating to the Petroleum-Spirit (Conveyance by Road) Regulations 1957, the Carbon Disulphide (Conveyance by Road) Regulations 1958, the Corrosive Substances (Conveyance by Road) Regulations 1971, the Inflammable Liquids (Conveyance by Road) Regulations 1971, the Inflammable Substances (Conveyance by Road) (Labelling) Regulations 1971, the Organic Peroxides (Conveyance by Road) Regulations 1973 and the Petroleum (Consolidation) Act 1928 (Conveyance by Road Regulations Exemptions) Regulations 1980
The Classification, Packaging and Labelling of Dangerous Substances Regulations 1984	S.I. 1984/1244	Regulation 16(1)(b), 16(4), 16(6)(b)(i) and Schedule 8

PART II
MODIFICATIONS

1. In section 18 of the Petroleum (Consolidation) Act 1928(a) after subsection (3) insert —

“(4) Nothing in this section shall apply to any carriage to which the Road Traffic (Carriage of Dangerous Substances in Packages etc.) Regulations 1986 apply.”.

2. The Dangerous Substances (Conveyance by Road in Road Tankers and Tank Containers) Regulations 1981(b) shall be modified as follows —

(a) in regulation 3(1)(g) after “1999 insert “or 7033”;

(b) in regulation 20(2), at the beginning, delete “Notwithstanding regulation 23”;

(c) for regulation 23 substitute the following Regulation —

“Information to be given to police officers and Department of Transport traffic examiners

23.—(1) A driver shall on request give to any police officer or traffic examiner any documents required to be carried under these Regulations and such other information in his possession as will enable that person to know the identity and quantity of dangerous substances being carried.

(2) In this regulation “traffic examiner” means a goods vehicle examiner within the meaning of section 56(1) of the Road Traffic Act 1972.”.

EXPLANATORY NOTE

(This Note is not part of the Regulations.)

1. These Regulations impose requirements in relation to the carriage of dangerous substances by road in packages. They also apply to the carriage of such substances in bulk except where they are carried in road tankers or tank containers. The Dangerous Substances (Conveyance by Road in Road Tankers and Tank Containers) Regulations 1981 apply to such carriage.

2. Dangerous substances are defined by regulation 2 and include substances which have the characteristic properties set out in Schedule 1. The Regulations apply to the carriage of dangerous substances in receptacles having a capacity of 200 litres or more except that for certain substances they apply to the carriage in smaller receptacles (regulation 3).

3. Regulation 4 imposes a duty on the operator of a vehicle used for carrying a dangerous substance to ensure that the vehicle and any freight container in which the substance is carried is fit for the purpose and is properly maintained. The operator is also required by regulation 5 to obtain from the consignor of the substance specified information about it and by regulation 6 to ensure that the driver is given information in writing to enable him to know the identity of the substance and its hazards. This regulation also requires the driver to keep this information on the vehicle while the substance is being carried. Regulation 7 requires the operator to ensure that the driver has received adequate instruction and training.

(a) 1928 c.32.

(b) S.I. 1981/1059.

4. Regulation 8 requires loads consisting of dangerous substances to be loaded, stowed and unloaded safely and regulation 9 requires precautions to be taken against fire or explosion. Limitations on the carriage of specified dangerous substances are imposed by regulation 10.

5. Vehicles which are used for the carriage of 500 kilograms or more of dangerous substances are required by regulation 11 to show rectangular orange plates at the front and rear of the vehicle and in the case of vehicles carrying 3 tonnes or more to be parked in a safe place or to be adequately supervised when parked (regulation 12).

6. The Regulations also provide for information relating to dangerous substances being carried on a vehicle to be given to a police officer or traffic examiner on request (regulation 13), for a defence in proceedings for contravening the Regulations (regulation 14) and for exemption certificates to be granted by the Health and Safety Executive (regulation 15).

7. Regulation 16 revokes the Orders and Regulations specified in Part I of Schedule 4 and modifies the enactments and instruments specified in Part II of that Schedule.

8. The Regulations will come into operation on 6th April 1987 except that regulation 7 (which relates to the training of drivers) will not come into operation until 6th April 1988.

9. Copies of relevant documents may be obtained as follows:-

- (a) the approved list [ISBN 0 11 883712 5 and Revision No. 1 ISBN 0 11 883888 1], the European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) [ISBN 0 11 550735 3], Regulations concerning the International Carriage of Dangerous Goods by Rail (RID) [ISBN 0 11 550681 0, amendment Number 1 to the 1985 edition ISBN 0 11 550745 0], from Her Majesty's Stationery Office;
- (b) the International Maritime Dangerous Goods Code [Volumes I to IV ISBN 92 801 1055 1, Volume V ISBN 92 801 1125 6], from the International Maritime Organisation, 4 Albert Embankment, London SE1 7SR.