

**OCCUPATIONAL HEALTH AND SAFETY AUTHORITY ACT
(CAP. 424)**

**Control of Major Accident Hazards (Amendment)
Regulations, 2005**

IN exercise of the powers conferred by article 12 of the Occupational Health and Safety Authority Act, the Minister for Education, Youth and Employment, after consultation with the Deputy Prime Minister and Minister for Justice and Home Affairs, the Minister for Rural Affairs and the Environment and the Occupational Health and Safety Authority, has made the following regulations:-

1. (1) The title of these regulations is the Control of Major Accident Hazards (Amendment) Regulations, 2005, and they shall be read and construed as one with the Control of Major Accident Hazards Regulations, 2003, herein referred to as "the principal regulations".

Citation and scope.

L.N. 37 of 2003

(2) The scope of these regulations is the implementation of Directive 2003/105/EC of the European Parliament and of the Council amending Council Directive 96/82/EC on the control of major-accident hazards involving dangerous substances.

2. The following paragraph shall be inserted immediately after the first paragraph of regulation 2 of the principal regulations:

Amends regulation 2 of the principal regulations.

"The scope of these Regulations is the implementation of European Council Directive 96/82/EC on the control of major accident hazards involving dangerous substances."

3. For paragraphs (e) and (f) of sub-regulation (2) of regulation 4 of the principal regulations, there shall be substituted the following:

Amends regulation 4 of the principal regulations.

"(e) the exploitation (exploration, extraction and processing) of minerals in mines, quarries, or by means of boreholes, with the exception of chemical and thermal processing operations and storage related to those operations which involve dangerous substances, as defined in Schedule 1;

(f) the offshore exploration and exploitation of minerals, including hydrocarbons;

(g) waste land-fill sites, with the exception of operational tailings disposal facilities, including tailing ponds or dams, containing dangerous substances as defined in Schedule 1, in particular when used in connection with the chemical and thermal processing of minerals."

4. Regulation 6 of the principal regulations shall be amended as follows:

Amends regulation 6 of the principal regulations.

(i) immediately at the end of sub-regulation (1) thereof, there shall be added the following new paragraph:

"(c) Within three months after the date on which these regulations apply to the establishment concerned, or other period as may be agreed in writing by the Authority, for establishments which subsequently fall within the scope of these regulations as laid down in regulation 4(1), the operator of the establishment shall send to the competent authority a notification containing the information specified in sub-regulation (2)."; and

(ii) immediately at the end of paragraph (b) in sub-regulation (3) thereof, there shall be added the following new sub-paragraph:

"(iv) modification of an establishment or an installation which could have significant repercussions on major accident hazards;"

5. The following new paragraph shall be inserted immediately at the end of sub-regulation (1) of regulation 7 of the principal regulations:

Amends regulation 7 of the principal regulations.

"(c) for establishments which subsequently fall within the scope of these regulations, the document referred to in this sub-regulation (1) shall be drawn up without delay, but at all events within three months after the date on which these regulations apply to the establishment concerned, as laid down in regulation 4(1)."

6. Regulation 8 of the principal regulations shall be amended as follows:

Amends regulation 8 of the principal regulations.

(i) for sub-regulation (2) there shall be substituted the following:

"(2) The safety report shall contain at least the data and

information listed in Schedule 3. It shall name the relevant organisations involved in the drawing up of the report. It shall also contain an updated inventory of the dangerous substances present in the establishment.";

(ii) immediately at the end of sub-regulation (3) there shall be added the following new paragraph:

"(d) for establishments which subsequently fall within the scope of these regulations, without delay, but at all events within one year after the date on which these regulations apply to the establishment concerned, as laid down in regulation 4(1)."; and

(iii) in sub-regulation (4), for the words "sub-regulation (3)(b) and (c)" there shall be substituted the words "sub-regulation (3)(b), (c) and (d)".

7. Regulation 10 of the principal regulations shall be amended as follows:

Amends regulation 10 of the principal regulations.

(i) immediately following paragraph (ii) of the proviso to sub-regulation (1) there shall be added the following:

"(iii) for establishments which subsequently fall within the scope of these regulations, without delay, but at all events within one year after the date on which these regulations apply to the establishment concerned, as laid down in this sub-regulation."; and

(ii) for sub-regulation (3) there shall be substituted the following:

"(3) The operator shall ensure that the internal emergency plans provided for in these regulations are drawn up in consultation with the personnel working inside the establishment, including long-term relevant subcontracted personnel, and that the public is consulted on external emergency plans when they are established or updated.".

8. Regulation 12 of the principal regulations shall be amended as follows:

Amends regulation 12 of the principal regulations.

(i) in sub-regulation (1) thereof, for paragraph (a) there shall be substituted the following:

"(a) ensure that persons and all establishments serving the public (such as schools and hospitals) who are likely to be affected by a major accident originating in an establishment covered by regulation 8 are supplied with information on safety measures and on the requisite behaviour in the event of a major accident at the establishment, regularly and in the most appropriate form, without their having to request it;" and

(ii) for sub-regulation (7) there shall be substituted the following:

"(7) In the case of establishments subject to the provisions of regulation 8, the operator shall ensure that the inventory of dangerous substances provided for in sub-regulation 8 (2) is made available to the public subject to the provisions of the first proviso to sub-regulation (6) hereof and of regulation 19."

9. Sub-regulation (4) of regulation 15 of the principal regulations shall be renumbered as paragraph (a) thereof, and immediately after paragraph (a) as renumbered there shall be added the following:

Amends regulation 15 of the principal regulations.

"(b) For establishments covered by these regulations, the competent authority shall supply the Commission with at least the following information:

(i) the name or trade name of the operator and the full address of the establishment concerned; and

(ii) the activity or activities of the establishment."

10. For Schedule 1 to the principal regulations there shall be substituted the First Schedule in the Schedule to these regulations.

Substitutes Schedule 1 to the principal regulations.

11. In Schedule 2 of the principal regulations , paragraph 4 shall be amended as follows:

Amends Schedule 2 to the principal regulations.

(i) for paragraph (a) there shall be substituted the following:

"(a) organisation and personnel — the roles and responsibilities of personnel involved in the management of major hazards at all levels in the organisation. The identification of training needs of such personnel and the provision of the training so identified. The involvement of employees and of subcontracted personnel working in the establishment;" and

(ii) for paragraph (e) there shall be substituted the

following:

"(e) planning for emergencies — adoption and implementation of procedures to identify foreseeable emergencies by systematic analysis, to prepare, test and review emergency plans to respond to such emergencies and to provide specific training for the staff concerned. Such training shall be given to all personnel working in the establishment, including relevant subcontracted personnel;"

12. In Schedule 3 of the principal regulations, for sub-paragraph (b) of paragraph 4 there shall be substituted the following:

Amends
Schedule 3 to
the principal
regulations.

"(b) assessment of the extent and severity of the consequences of identified major accidents, including maps, images or, as appropriate, equivalent descriptions, showing areas which are liable to be affected by such accidents arising from the establishment, subject to the provisions of the first proviso to sub-regulation 12(6) and of regulation 19;"

SCHEDULE

Regulation 10

SCHEDULE 1

Regulations 2 and 3(1)

DANGEROUS SUBSTANCES TO WHICH THE REGULATIONS APPLY

Part 1

Introduction

1. This Schedule applies to the presence of dangerous substances at any establishment and determines the application of the relevant regulations in accordance with regulation 3(1).
2. Mixtures and preparations shall be treated in the same way as pure substances provided they remain within the concentration limits set according to their properties under the relevant provisions specified in Part 3, Note 1, unless a percentage composition or other description is specifically given.
3. The qualifying quantities set out in Parts 2 and 3 relate to each establishment.
4. The quantities to be considered for the application of the relevant regulations are the maximum quantities which are present at any one time. Dangerous substances present at an establishment only in quantities equal to or less than 2 per cent of the relevant qualifying quantity shall be ignored for the purposes of calculating the total quantity present if their location within an establishment is such that it cannot act as an initiator of a major accident elsewhere on site.
5. The rules given in Part 3, Note 4 governing the addition of dangerous substances, or categories of dangerous substances, shall apply where appropriate.
6. For the purposes of these Regulations, a gas is any substance that has an absolute vapour pressure equal to or greater than 101.3 kPa at a temperature of 20 °C.
7. For the purposes of these Regulations, a liquid is any substance that is not defined as a gas and that is not in the solid state at a temperature of 20 °C and at a standard pressure of 101.3kPa.

Part 2

Named Substances

Where a substance or group of substances listed in this Part also falls within a category of Part 3, the qualifying quantities set out in this Part must be used.

<i>Column 1</i>	<i>Column 2</i>	<i>Column 3</i>
<i>Dangerous substances</i>	<i>Quantity in tonnes</i>	
Ammonium nitrate (as described in Note 1 of this Part)	5,000	10,000
Ammonium nitrate (as described in Note 2 of this Part)	1,250	5,000
Ammonium nitrate (as described in Note 3 of this Part)	350	2,500
Ammonium nitrate (as described in Note 4 of this Part)	10	50
Potassium nitrate (as described in Note 5 of this Part)	5,000	10,000
Potassium nitrate (as described in Note 6 of this Part)	1,250	5,000
Arsenic pentoxide, arsenic (V) acid and/or salts	1	2
Arsenic trioxide, arsenious (III) acid and/or salts		0.1
Bromine	20	100
Chlorine	10	25
Nickel compounds in inhalable powder form (nickel monoxide, nickel dioxide, nickel sulphide, trinickel disulphide, dinickel trioxide)		1

Ethyleneimine	10	20
Fluorine	10	20
Formaldehyde (concentration =>90%)	5	50
Hydrogen	5	50
Hydrogen chloride (liquefied gas)	25	250
Lead alkyls	5	50
Liquefied extremely flammable gases (including LPG) and natural gas (whether liquefied or not)	50	200
Acetylene	5	50
Ethylene oxide	5	50
Propylene oxide	5	50
Methanol	500	5,000
4, 4-Methylenebis (2-chloraniline) and/or salts, in powder form		0.01
Methylisocyanate		0.15
Oxygen	200	2,000
Toluene diisocyanate	10	100
Carbonyl dichloride (phosgene)	0.3	0.75
Arsenic trihydride (arsine)	0.2	1
Phosphorus trihydride (phosphine)	0.2	1
Sulphur dichloride	1	1
Sulphur trioxide	15	75
Polychlorodibenzofurans and polychlorodibenzodioxins (including TCDD), calculated in TCDD equivalent		0.001
The following CARCINOGENS at concentrations above 5 % by weight: 4-Aminobiphenyl and/or its salts, Benzotrichloride, Benzidine and/or salts, Bis (chloromethyl) ether, Chloromethyl methyl ether, 1,2-Dibromoethane, Diethyl sulphate, Dimethyl sulphate, Dimethylcarbamoyl chloride, 1,2-Dibromo-3-chloropropane, 1,2-Dimethylhydrazine, Dimethylnitrosamine, Hexamethylphosphoric triamide, Hydrazine, 2- Naphthylamine and/or salts, 4-Nitrodiphenyl, and 1,3 Propanesultone	0.5	2
Petroleum products: (a) gasolines and naphthas, (b) kerosenes (including jet fuels), (c) gas oils (including diesel fuels, home heating oils and gas oil blending streams)	2,500	25,000

Notes

1. Ammonium nitrate (5,000/10,000): fertilisers capable of self-sustaining decomposition

This applies to ammonium nitrate-based compound/composite fertilisers (compound/composite fertilisers containing ammonium nitrate with phosphate and/or potash) in which the nitrogen content as a result of ammonium nitrate is

- between 15.75 % ⁽¹⁾ and 24.5 % ⁽²⁾ by weight, and either with not more than 0.4 % total combustible/organic materials or which fulfil the requirements of the Fertilisers Regulations 2002,
- 15.75 % ⁽³⁾ by weight or less and unrestricted combustible materials,

and which are capable of self-sustaining decomposition according to the UN Trough Test (see United Nations Recommendations on the Transport of Dangerous Goods: Manual of Tests and Criteria, Part III, subsection 38.2).

2. Ammonium nitrate (1,250/5,000): fertiliser grade

This applies to straight ammonium nitrate-based fertilisers and to ammonium nitrate-based compound/composite fertilisers in which the nitrogen content as a result of ammonium nitrate is

- more than 24.5 % by weight, except for mixtures of ammonium nitrate with dolomite, limestone and/or calcium carbonate with a purity of at least 90 %,
- more than 15.75 % by weight for mixtures of ammonium nitrate and ammonium sulphate,
- more than 28 % ⁽⁴⁾ by weight for mixtures of ammonium nitrate with dolomite, limestone and/or calcium carbonate with a purity of at least 90 %,

and which fulfil the requirements of the Fertilisers Regulations 2002.

3. Ammonium nitrate (350/2,500): technical grade

This applies to:

- ammonium nitrate and preparations of ammonium nitrate in which the nitrogen content as a result of the ammonium nitrate is
 - between 24.5 % and 28 % by weight, and which contain not more than 0.4 % combustible substances,
 - more than 28 % by weight, and which contain not more than 0.2 % combustible substances,
- aqueous ammonium nitrate solutions in which the concentration of ammonium nitrate is more than 80 % by weight.

4. Ammonium nitrate (10/50): “off-specs” material and fertilisers not fulfilling the detonation test

This applies to:

- material rejected during the manufacturing process and to ammonium nitrate and preparations of ammonium nitrate, straight ammonium nitrate-based fertilisers and ammonium nitrate-based compound/composite fertilisers referred to in notes 2 and 3, that are being or have been returned from the final user to a manufacturer, temporary storage or reprocessing plant for reworking, recycling or treatment for safe use, because they no longer comply with the specifications of Notes 2 and 3;
- fertilisers referred to in Note 1, first indent, and Note 2 which do not fulfil the requirements of the Fertilisers Regulations 2002.

5. Potassium nitrate (5,000/10,000): composite potassium-nitrate based fertilisers composed of potassium nitrate in prilled/granular form.

6. Potassium nitrate (1,250/5,000): composite potassium-nitrate based fertilisers composed of potassium nitrate in crystalline form.

7. Polychlorodibenzofurans and polychlorodibenzodioxins

The quantities of polychlorodibenzofurans and polychlorodibenzodioxins are calculated using the following factors:

International Toxic Equivalent Factors (ITEF) for the congeners of concern (NATO/CCMS)

2, 3, 7, 8-TCDD	1
1, 2, 3, 7, 8-PeDD	0.5
1,2,3,4,7,8-HxCDD 1,2,3,6,7,8-HxCDD 1,2,3,7,8,9-HxCDD	0.1
1, 2, 3, 4, 6, 7, 8-HpCDD	0.01
OCDD	0.001
2, 3, 7, 8-TCDF	0.1
2, 3, 4, 7, 8-PeCDF	0.5
1, 2, 3, 7, 8-PeCDF	0.05
1, 2, 3, 4, 7, 8-HxCDF 1, 2, 3, 7, 8, 9-HxCDF 1, 2, 3, 6, 7, 8-HxCDF 2, 3, 4, 6, 7, 8-HxCDF	0.1
1, 2, 3, 4, 6, 7, 8-HpCDF 1, 2, 3, 4, 7, 8, 9-HpCDF	0.01
OCDF	0.001

(T=tetra, Pe=penta, Hx=hexa, Hp=hepta, O=octa)

(1) 15.75 % nitrogen content by weight as a result of ammonium nitrate corresponds to 45 % ammonium nitrate.

(2) 24.5 % nitrogen content by weight as a result of ammonium nitrate corresponds to 70 % ammonium nitrate.

(3) 15.75 % nitrogen content by weight as a result of ammonium nitrate corresponds to 45 % ammonium nitrate.

(4) 28 % nitrogen content by weight as a result of ammonium nitrate corresponds to 80 % ammonium nitrate.

Part 3

Categories of Substances and Preparations not specifically named in Part 2

<i>Column 1</i>	<i>Column 2</i>	<i>Column 3</i>
<i>Categories of dangerous substances</i>	<i>Quantity in tonnes</i>	
1. VERY TOXIC	5	20
2. TOXIC	50	200
3. OXIDISING	50	200
4. EXPLOSIVE (see Note 2) where the substance, preparation or article falls under UN/ADR Division 1.4	50	200
5. EXPLOSIVE (see Note 2) where the substance, preparation or article falls under any of: UN/ADR Divisions 1.1, 1.2, 1.3, 1.5 or 1.6 or risk phrase R2 or R3	10	50
6. FLAMMABLE (where the substance or preparation falls within the definition given in Note 3(a))	5,000	50,000
7a. HIGHLY FLAMMABLE (where the substance or preparation falls within the definition given in Note 3(b)(i))	50	200
7b. HIGHLY FLAMMABLE liquids (where the substance or preparation falls within the definition given in Note 3(b)(ii))	5,000	50,000
8. EXTREMELY FLAMMABLE (where the substance or preparation falls within the definition given in Note 3(c))	10	50
9. DANGEROUS FOR THE ENVIRONMENT risk phrases:		
i) R50: "Very toxic to aquatic organisms" (including R50/53)	100	200
ii) R51/53: "Toxic to aquatic organisms; may cause long term adverse effects in the aquatic environment"	200	500
10. ANY CLASSIFICATION not covered by those given above in combination with risk phrases:		
(i) R14: "Reacts violently with water" (including R14/15)	100	500
(ii) R29: "in contact with water, liberates toxic gas"	50	200

Notes

- Substances and preparations are classified according to the following Directives and their current adaptation to technical progress:

Council Directive 67/548/EEC of 27 June 1967 on the approximation of the laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances,

Directive 1999/45/EC of the European Parliament and of the Council of 31 May 1999 concerning the approximation of laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labelling of dangerous preparations.

In the case of substances and preparations which are not classified as dangerous according to either of the above directives, for example waste, but which nevertheless are present, or are likely to be present, in an establishment and which possess or are likely to possess, under the conditions found at the establishment, equivalent properties in terms of major-accident potential, the procedures for provisional classification shall be followed in accordance with the relevant article of the appropriate Directive.

In the case of substances and preparations with properties giving rise to more than one classification, for the purposes of these Regulations the lowest qualifying quantities shall apply. However, for the application of the rule in Note 4, the qualifying quantity used shall always be the one corresponding to the classification concerned.

2. An “explosive” means:

— a substance or preparation which creates the risk of an explosion by shock, friction, fire or other sources of ignition (risk phrase R2),

— a substance or preparation which creates extreme risks of explosion by shock, friction, fire or other sources of ignition (risk phrase R3), or

— a substance, preparation or article covered by Class 1 of the European Agreement concerning the International Carriage of Dangerous Goods by Road (UN/ADR), concluded on 30 September 1957, as amended, as transposed by Council Directive 94/55/EC of 21 November 1994 on the approximation of the laws of the Member States with regard to the transport of dangerous goods by road.

Included in this definition are pyrotechnics, which for the purposes of these Regulations are defined as substances (or mixtures of substances) designated to produce heat, light, sound, gas or smoke or a combination of such effects through self-sustained exothermic chemical reactions. Where a substance or preparation is classified by both UN/ADR and risk phrase R2 or R3, the UN/ADR classification shall take precedence over assignment of risk phrases.

Substances and articles of Class 1 are classified in any of the divisions 1.1 to 1.6 in accordance with the UN/ADR classification scheme. The divisions concerned are:

Division 1.1: “Substances and articles which have a mass explosion hazard (a mass explosion is an explosion which affects almost the entire load virtually instantaneously).”

Division 1.2: “Substances and articles which have a projection hazard but not a mass explosion hazard.”

Division 1.3: “Substances and articles which have a fire hazard and either a minor blast hazard or a minor projection hazard or both, but not a mass explosion hazard:

(a) combustion of which gives rise to considerable radiant heat; or

(b) which burn one after another, producing minor blast or projection effects or both.”

Division 1.4: “Substances and articles which present only a slight risk in the event of ignition or initiation during carriage. The effects are largely confined to the package and no projection of fragments of appreciable size or range is to be expected. An external fire shall not cause virtually instantaneous explosion of virtually the entire contents of the package.”

Division 1.5: “Very insensitive substances having a mass explosion hazard which are so insensitive that there is very little probability of initiation or of transition from burning to detonation under normal conditions of carriage. As a minimum requirement they shall not explode in the external fire test.”

Division 1.6: “Extremely insensitive articles which do not have a mass explosion hazard. The articles contain only extremely insensitive detonating substances and demonstrate a negligible probability of accidental initiation or propagation. The risk is limited to the explosion of a single article.”

Included in this definition are also explosive or pyrotechnic substances or preparations contained in articles. In the case of articles containing explosive or pyrotechnic substances or preparations, if the quantity of the substance or preparation contained is known, that quantity shall be considered for the purposes of these Regulations. If the quantity is not known, then, for the purposes of these Regulations, the whole article shall be treated as explosive.

3. "Flammable", "highly flammable", and "extremely flammable" in categories 6, 7 and 8 mean:

(a) flammable liquids –

substances and preparations having a flash point equal to or greater than 21°C and less than or equal to 55°C (risk phrase R 10), supporting combustion;

(b) highly flammable liquids –

(i) -substances and preparations which may become hot and finally catch fire in contact with air at ambient temperature without any input of energy (risk phrase R 17),

-substances and preparations which have a flash point lower than 55°C and which remain liquid under pressure, where particular processing conditions, such as high pressure or high temperature, may create major-accident hazards;

(ii) substances and preparations having a flash point lower than 21°C and which are not extremely flammable (risk phrase R 11, second indent);

(c) extremely flammable gases and liquids –

(i) liquid substances and preparations which have a flash point lower than 0°C and the boiling point (or, in the case of a boiling range, the initial boiling point) of which at normal pressure is less than or equal to 35°C (risk phrase R 12, first indent), and

(ii) gases which are flammable in contact with air at ambient temperature and pressure (risk phrase R12, second indent), which are in a gaseous or supercritical state, and

(iii) flammable and highly flammable liquid substances and preparations maintained at a temperature above their boiling point.

4. In the case of an establishment where no individual substance or preparation is present in a quantity above or equal to the relevant qualifying quantities, the following rule shall be applied to determine whether the establishment is covered by the relevant requirements of these Regulations.

These Regulations shall apply if the sum

$q_1/Q_{U1} + q_2/Q_{U2} + q_3/Q_{U3} + q_4/Q_{U4} + q_5/Q_{U5} + \dots$ is greater than or equal to 1,

where q_x = the quantity of dangerous substance x (or category of dangerous substances) falling within Parts 2 or 3 of this Schedule,

and Q_{UX} = the relevant qualifying quantity for substance or category x from column 3 of Parts 2 or 3.

These Regulations shall apply, with the exception of Regulations 8, 10 and 12, if the sum

$q_1/Q_{L1} + q_2/Q_{L2} + q_3/Q_{L3} + q_4/Q_{L4} + q_5/Q_{L5} + \dots$ is greater than or equal to 1,

where q_x = the quantity of dangerous substance x (or category of dangerous substances) falling within Parts 2 or 3 of this Schedule,

and Q_{LX} = the relevant qualifying quantity for substance or category x from column 2 of Parts 2 or 3.

This rule shall be used to assess the overall hazards associated with toxicity, flammability, and eco-toxicity. It must therefore be applied three times:

- (a) for the addition of substances and preparations named in Part 2 and classified as toxic or very toxic, together with substances and preparations falling into categories 1 or 2;
- (b) for the addition of substances and preparations named in Part 2 and classified as oxidising, explosive, flammable, highly flammable, or extremely flammable, together with substances and preparations falling into categories 3, 4, 5, 6, 7a, 7b or 8;
- (c) for the addition of substances and preparations named in Part 2 and classified as dangerous for the environment (R50 (including R50/53) or R51/53), together with substances and preparations falling into categories 9(i) or 9(ii);

The relevant provisions of these Regulations apply if any of the sums obtained by (a), (b) or (c) is greater than or equal to 1.