



Maritime and Coastguard Agency

The Merchant Shipping and Fishing Vessels (Health and Safety at Work) (Carcinogens and Mutagens) Regulations 2007

Notice to all Ship, Yacht and Fishing Vessel Owners, Operators and Managers and other employers of seafarers; Masters, Officers and Seafarers on Merchant Ships and Yachts; and Skippers and Crew of Fishing Vessels

This note should be read in conjunction with the Merchant Shipping and Fishing Vessels (Health and Safety at Work)(Carcinogens & Mutagens) Regulations 2007 and MGN 20, which provides details, and guidance on interpretation of the Merchant Shipping and Fishing Vessels (Health and Safety at Work) Regulations 1997.

PLEASE NOTE:-

Where this document provides guidance on the law it should not be regarded as definitive. The way the law applies to any particular case can vary according to circumstances - for example, from vessel to vessel and you should consider seeking independent legal advice if you are unsure of your own legal position

Summary

This Marine Guidance Note provides guidance on the requirements for the protection of workers from the risks related to exposure to carcinogens and mutagens at work arising from the implementation in the United Kingdom of European Commission Directive 2004/37/EC by the Merchant Shipping and Fishing Vessels (Health and Safety at Work) (Carcinogens and Mutagens) Regulations 2007

1. Introduction

- 1.1 The Merchant Shipping and Fishing Vessels (Health and Safety at Work) (Carcinogens and Mutagens) Regulations 2007 (SI 2007/ 3100) (the "Carcinogens and Mutagens Regulations") implement EC Directive 2004/37/EC which introduced requirements for the protection of workers from the risks related to exposure to carcinogens and mutagens at work. They require that risk assessment under the General Duties Regulations considers the risks to workers arising from exposure to carcinogens and mutagens.
- 1.2 The Carcinogens and Mutagens Regulations which come into force on 1 March 2008, complete the United Kingdom's implementation of EC Directive 2004/37/EC, (which consolidated Directives 1990/394/EEC, 1997/42/EC and 1999/38/EC), on requirements for the protection of workers from the risks related to exposure to carcinogens and mutagens by extending their coverage to seafarers and other workers on ships and fishing vessels. The Health and Safety Executive (HSE) have already implemented the Directive for land-based workers, largely through the Control of Substances Hazardous to Health Regulations 2002 (as amended).

- 1.3. The Carcinogens and Mutagens Directive 2004/37/EC is a "Daughter Directive" of Directive 89/391/EEC (the "Framework Directive"), which introduced measures to encourage improvements in the safety and health of workers at work. This Daughter Directive builds on the Framework Directive by introducing requirements to improve the safety and health of workers potentially at risk from carcinogens and mutagens. The Framework Directive was implemented for the maritime sector in the UK by the Merchant Shipping and Fishing Vessels (Health and Safety at Work) Regulations 1997 (SI 1997/2962) (as amended) (the "General Duties Regulations"). The effect of the new Regulations is that the employer's risk assessment under Regulation 7 of the General Duties Regulations must now include consideration of whether any risks to workers exist or could arise from exposure to carcinogens or mutagens. If such risks are identified, appropriate measures must be taken.

Main provisions of the Carcinogens and Mutagens Regulations

2. Interpretation (Regulation 2)

- 2.1. A **carcinogen** is any substance for which there is sufficient evidence to establish a link between human exposure to that substance and the development of cancer. This is defined in the Regulations as—

- (a) a substance or preparation which, if classified in accordance with the classification provided for by regulation 4 of the Chemicals (Hazard Information and Packaging for Supply) Regulations 2002 would be in the category of danger, carcinogenic (category 1) or carcinogenic (category 2) whether or not the substance or preparation would be required to be classified under those Regulations; or
- (b) a substance or preparation—
 - (i) listed in Schedule 1 to the Carcinogens and Mutagens Regulations, or
 - (ii) which arises from a process specified in Schedule 1 and is a substance hazardous to health;

Schedule 1 to the Regulations is repeated at Annex 1 to this MGN. A particularly relevant marine example is used engine oil as this is likely to be found on every type of motorised vessel.

- 2.2. A **mutagen** is a substance for which there is sufficient evidence to establish a link between human exposure to that substance and heritable genetic damage. This is defined in the Regulations as--

"a substance or preparation which if classified in accordance with the classification provided for by regulation 4 of the Chemicals (Hazard Information and Packaging for Supply) Regulations 2002 would be in the category of danger, mutagenic (category 1) or mutagenic (category 2) whether or not the substance or preparation would be required to be classified under those Regulations."

- 2.3. The Chemicals (Hazard Information and Packaging for Supply) Regulations 2002 (known as "CHIP" or sometimes "CHIP 3"), referred to in paragraphs 2.1 and 2.2, were produced by HSE to implement the Directive for land-based workers. They apply to suppliers of dangerous chemicals and require the supplier of a dangerous chemical to:

- identify the hazards (dangers) of the chemical. This is known as 'classification';
 - give information about the hazards to their customers. Suppliers usually provide this information on the package itself (eg a label) and, if supplied for use at work, in a Safety Data Sheet (SDS);
 - package the chemical safely.
- 2.4. A list of the information to be included in a Safety Data Sheet is at Annex 2. In conjunction with the CHIP Regulations, HSE also produce an "Approved Supply List" which is a comprehensive list indicating the risk category of a wide range of products, not just those which are classified as carcinogens or mutagens.
- 3. Application (Regulation 3)**
- 3.1 The Regulations generally apply to all activities of workers on UK registered vessels wherever they are in the world and certain provisions also apply to non-UK ships in UK waters. The application covers all types of commercial vessel and includes those on inland waters. Exceptions to the Regulations cover:
- workers exposed to radiation covered by the Treaty establishing the European Atomic Energy Community
 - land-based workers who are subject HSE's Control of Substances Hazardous to Health Regulations 2002 or the Northern Ireland "Control of Substances Hazardous to Health Regulations (Northern Ireland) 2003".
- 3.2 In addition to the exceptions referred to in paragraph 3.1, Regulation 3(2) provides for a limited derogation from the requirements of the Carcinogens and Mutagens Regulations for vessels being used in the course of public service activities or activities for the purpose of civil protection services where because of characteristics peculiar to those activities full compliance with the Carcinogens and Mutagens Regulations is not possible.
- 3.3 For the purposes of the derogation referred to in paragraph 3.2 above the Regulations define "civil protection services" as including the fire and rescue and ambulance services and search and rescue services provided by any other person. This derogation will also apply to any vessel engaged in search and rescue activities when answering a distress call or when requested to do so by HM Coastguard or the appropriate authority of another state.
- 3.4 Similarly for the purposes of the derogation referred to in paragraph 3.2 above the Regulations define "public service activities" as including the activities of the armed forces, HM Coastguard, HM Revenue and Customs, immigration officers, police, prison officers and the security and intelligence services. This derogation will also apply to any vessel engaged in matters relating to national security whether or not it is directly operated by or under the control of the security services. This derogation does not apply to ferries whether operated by a public body or not.
- 3.5 The derogations referred to in paragraphs 3.2 to 3.4 above only apply to the specific provision, or part thereof, where compliance is not possible because of the activity being carried out and only for the length of time when compliance is not possible. All other provisions are to be complied with in full and even for those provisions where full compliance is not possible the employer must ensure that the health and safety of workers who are or who are likely to be exposed to risks from carcinogens and mutagens as a result is protected so far as is reasonably practicable.

4. Assessment of Health Risks (Regulation 4)

4.1 General guidance on health and safety risk assessment is contained in Marine Guidance Note - MGN 20 (M+F). It is very much a matter for the individual employer to decide how to conduct the risk assessment and whether specialist advice is needed. In broad terms a risk assessment to take account of possible exposure to carcinogens and mutagens is likely to involve:

- checking products carried on board, either for use on the vessel or as cargo, to see whether they have a warning symbol on the label which indicates that there is a potential risk to health and safety
- where such symbols are present, obtaining Safety Data Sheets from the respective manufacturers/suppliers, unless sufficient information is provided on the product itself.
- paying special attention to those at particular risk such as potential, new or expectant mothers, young persons; and
- considering all possible routes of exposure, including absorption into or through the skin.

In some cases, more complex issues may need to be considered, for example in the case of substances which are not hazardous on their own, but have the potential to become so if mixed with other substances. In such cases appropriate expert advice should be sought from qualified persons such as consultants or occupational health practitioners. More detailed guidance on the identification of hazards and the assessment of risks can be found in the International Maritime Dangerous Goods Code and the Code of Safe Working Practices for Merchant Seamen.

5. Reduction and replacement of Carcinogens and Mutagens (Regulation 5)

5.1. Where potential risks from carcinogens and mutagens are identified employers are required to take appropriate measures to:

- (i) remove the risk entirely by replacing them with substances, preparations or processes which, under their conditions of use, are not dangerous; **or where that is not possible**,
- (ii) reduce the use the risk by replacing them, in so far as it is technically possible, by substances, preparations or processes which, under their conditions of use, are less dangerous to workers' health or safety.

6. Prevention and reduction of exposure (Regulation 6)

6.1. Where the risk assessment required by regulation 4 reveals a risk to workers' health and safety from carcinogens and mutagens, and the measures required by paragraph 5.1 above, do not result in the complete removal of that risk but only reduce it, employers are required to

- (a) ensure that the carcinogen or mutagen is, so far as technically possible, manufactured or used in a closed system;
- (b) ensure that the level of exposure of workers is reduced to as low a level as is technically possible; and

- (c) ensure that in no circumstances does the exposure exceed the limit values set out in the table in Schedule 2 to the Regulations (replicated at Annex 3 to this MGN). (NOTE - In this context “limit value” means, unless otherwise specified, the limit of the time-weighted average of the concentration for a carcinogen or mutagen in the air within the breathing zone of a worker in relation to a specified reference period as set out in that Schedule).

6.2 The reference to replacement by “less dangerous“ substances in paragraph 5.1 should not be assumed to mean any substance that is less dangerous than that which it is replacing but means replacement by a substance that is the least dangerous.

6.3. In addition, wherever a carcinogen or mutagen is used, the employer shall take all the measures specified in Schedule 3 to the Regulations (replicated at Annex 4 to this MGN). The list is not an exhaustive list of measures and it is for the employer to decide whether any additional measures might be appropriate in the individual circumstances.

7. Information for the Secretary of State (Regulation 7)

7.1 Where the employer’s risk assessment reveals a risk to workers’ health and safety, the Maritime and Coastguard Agency, on behalf of the Secretary of State, may request the employer to provide the following information:-

- the activities or industrial processes assessed, including the reasons for using carcinogens or mutagens;
- the quantities of substances or preparations manufactured or used which contain carcinogens or mutagens;
- the number of workers exposed;
- the preventive measures taken;
- the type of protective equipment used;
- the nature and degree of exposure;
- the cases of replacement.

8. Unforeseen Exposure (Regulation 8)

8.1 The employer is required to inform workers and take appropriate precautions, to restrict the exposure of workers, if an unforeseeable event or accident may result in an abnormal exposure of workers (e.g. leakage of a hazardous cargo).

9. Foreseeable Exposure (Regulation 9)

9.1 Similarly an employer is required to put in place appropriate measures to deal with activities for which there is a foreseeable risk of exposure.

10. Access to Risk Areas (Regulation 10)

10.1 The employer is required to restrict access to areas where there is a risk of exposure to carcinogens and mutagens to only those workers who are required to enter them in pursuance of their work or duties.

11. Hygiene and Individual Protection Measures (Regulation 11)

- 11.1 Where there is a risk of exposure to carcinogens and mutagens, hygiene and individual protection measures are also required to be put in place, including ensuring that:-
- (a) workers do not eat, drink or smoke in areas where there is a risk of contamination by carcinogens or mutagens;
 - (b) workers are provided with appropriate special clothing;
 - (c) separate storage places are provided for working or protective clothing and for other clothes;
 - (d) workers are provided with appropriate and adequate washing and toilet facilities;
 - (e) protective equipment is properly stored in a well defined place and is checked and cleaned if possible before, and in any case after, each use; and
 - (f) defective equipment is properly repaired or replaced before further use.

12. Information and Training of Workers (Regulation 12)

- 12.1. Employers must ensure that workers are provided with information and training as appropriate to ensure that they are aware of potential risks to health from exposure and of the steps to be taken by workers in the case of incidents to prevent exposure.

13. Consultation with workers (Regulation 13)

- 13.1. Employers must consult with workers and their representatives on matters covered by the Regulations as required by Regulation 20 of the Merchant Shipping and Fishing Vessels (Health and Safety at Work) Regulations 1997.

14. Health Surveillance (Regulation 14)

- 14.1. Where a risk assessment identifies a risk of exposure to carcinogens or mutagens, the employer should provide health surveillance. It is for the employer to decide whether such health surveillance shall be provided "in house", perhaps by a company employed doctor or occupational health care professional, or is contracted out to a health care provider or other body. Any doctor or body undertaking health surveillance of workers exposed to carcinogens or mutagens must be familiar with the exposure conditions or circumstances of each worker. In addition health monitoring of workers must be carried out in accordance with the principles and practices of occupational medicine and must include at least the following measures—

- (a) keeping records of a worker's medical and occupational history;
- (b) a personal interview;
- (c) where appropriate, biological monitoring,

as well as detection of early and reversible effects. Whatever method of health surveillance is provided, the primary requirement is that a worker should be able to undergo appropriate health screening before exposure and at regular intervals thereafter in a manner which permits the implementation of individual and occupational hygiene measures. If a worker is found to be suffering from an abnormality which is suspected to be the result of exposure to carcinogens or mutagens, the doctor or body responsible for the health surveillance should be able to request that other workers who have been similarly exposed should undergo health surveillance.

- 14.2. Where health surveillance is carried out, the person or body responsible should ensure that an individual medical record is kept for each person undergoing such surveillance **(having regard to the need to ensure the confidentiality of such information)**. Additionally the doctor or authority responsible for health surveillance must be in a position to propose that any protective or preventive measures be taken in respect of any individual worker. Workers must be given access to the results of health surveillance which concern them and the workers or the employer may request a review of the results of health surveillance. Further tests may also be decided upon for each worker when he is the subject of health monitoring, in the light of the most recent knowledge available to occupational medicine.
- 14.3. Each employer must also keep an up-to-date list of all workers engaged in activities where the risk assessment has identified a risk to their health or safety, including (if the information is available) the exposure to which they have been subjected.
- 14.4. All cases of cancer which can be identified as resulting from occupational exposure to a carcinogen or mutagen are required to be notified to the Secretary of State for Transport (in practice the Maritime and Coastguard Agency.)

15. Record Keeping (Regulation 15)

The list referred to in paragraph 14.3 above as well as the individual medical records referred to in paragraph 14.2 are required to be kept for at least 40 years following the end of exposure and are to be made available to the Secretary of State for Transport (in practice the Maritime and Coastguard Agency) should the employer cease trading.

16. Persons on whom duties are imposed (Regulation 16)

- 16.1 It is the duty of every employer, and any other person on whom a duty is imposed by the Carcinogens and Mutagens Regulations to comply with the relevant provisions of those Regulations.
- 16.2. Where any duty under the Carcinogens and Mutagens Regulations is imposed on individuals who do not have responsibility for the operation of the ship, such duty is extended to **“any person who does have control of the matter to which the Regulation in question relates”**, which may be a particular employer or employers or some other party.
- 16.3. In addition to the responsibility placed on the employer(s) there is a responsibility placed on **every worker to which the Regulations apply** to make full and proper use of all protective equipment provided by the employer, and to give effect to all instruction and training with which the worker has been provided.

17. Offences and penalties (Regulations 17 - 19)

- 17.1. Regulations 17 to 19 are the enforcement provisions; any contravention of the Carcinogens and Mutagens Regulations is an offence. There is also provision for corporate offences and where any proceedings are instituted for an offence under the Carcinogens and Mutagens Regulations which consists of a failure to comply with a duty or requirement to do something so far as is reasonably practicable, it will be for the defendant to prove that compliance with that duty or requirement was not reasonably practicable.

18. Medicinal Use of Coal Tar

- 18.1. Schedule 1 to the Carcinogens and Mutagens Regulations (set out at Annex 1 to this MGN) specifically lists polycyclic aromatic hydrocarbons present in coal soot, coal tar or coal pitch as substances to which the definition of carcinogen relates. Having taken medical advice on this the Department considers that it should be noted that, for the purposes of the Carcinogen & Mutagen regulations, the reference to coal tar does not apply to coal tar used for the medical treatment of Psoriasis.

19. Additional Guidance

- 19.1. Further information on carcinogens and mutagens, Safety Data Sheets, and risk assessments can be obtained from a variety of sources including the internet. Some sources of additional information/guidance are set out at Annex 5 to this MGN.

More Information

Seafarer Health & Safety Branch
Maritime and Coastguard Agency
Bay 2/09
Spring Place
105 Commercial Road
Southampton
SO15 1EG

Tel : +44 (0) 23 8032 9246
Fax : +44 (0) 23 8032 9251
e-mail: seafarer.h&s@mcga.gov.uk

General Inquiries: 24 Hour Infoline
infoline@mcga.gov.uk
0870 600 6505

MCA Website Address: www.mcga.gov.uk

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**OTHER SUBSTANCES AND PROCESSES TO WHICH THE DEFINITION OF CARCINOGEN
RELATES**

Aflatoxins.

Arsenic.

Auramine manufacture.

Work involving exposure to dusts, fumes and sprays produced during the roasting and electro-refining of cupro-nickel mattes. Work involving exposure to polycyclic aromatic hydrocarbons present in coal soot, coal tar or coal pitch..

Hardwoods dusts.

Isopropyl alcohol manufacture (strong acid process).

Leather dust in boot and shoe manufacture, arising during preparation and finishing.

Magenta manufacture.

Mustard gas (beta, beta'- dichlorodiethyl sulphide).

Rubber manufacturing and processing giving rise to rubber process dust and rubber fume.

Used engine oils.

The following polychlorodibenzodioxins—

2,3,7,8-TCDD
1,2,3,7,8-PeCDD
1,2,3,4,7,8-HxCDD
1,2,3,6,7,8-HxCDD
1,2,3,7,8,9-HxCDD
1,2,3,4,6,7,8-HpCDD
OCDD.

The following polychlorodibenzofurans—

2,3,7,8-TCDF
2,3,4,7,8-PeCDF
1,2,3,7,8-PeCDF
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
1,2,3,4,6,7,8-HpCDF
1,2,3,4,7,8,9-HpCDF
OCDF.

Where T=tetra, Pe=penta, Hx=hexa, Hp=hepta and O=octa.

Safety Data Sheets

Under EC Directive 91/155/EC any person established within the Community who is responsible for placing a dangerous substance or preparation on the market, whether the manufacturer, importer or distributor, shall supply the recipient who is an industrial user of the substance or preparation with a safety data sheet containing the information under the following obligatory headings:

1. identification of the substance/preparation and of the company/undertaking;
2. composition/information on ingredients;
3. hazards identification;
4. first-aid measures;
5. fire-fighting measures;
6. accidental release measures;
7. handling and storage;
8. exposure controls/personal protection;
9. physical and chemical properties;
10. stability and reactivity;
11. toxicological information;
12. ecological information;
13. disposal considerations;
14. transport information;
15. regulatory information;
16. other information.

TABLE OF LIMIT VALUES

Name of agent	EINECS ⁽¹⁾	CAS ⁽²⁾	Limit values		Notation
			Mg/m ³ ⁽³⁾	ppm ⁽⁴⁾	
Benzene	200-753-7	71-43-2	3,25 ⁽⁵⁾	1 ⁽⁵⁾	Skin ⁽⁶⁾
Vinyl chloride monomer	200-831	75-01-04	7,77 ⁽⁵⁾	3 ⁽⁵⁾	—
Hardwood dusts	—	—	5,0 ⁽⁵⁾⁽⁷⁾	—	—

(1) EINECS: European Inventory of Existing Chemical Substances

(2) CAS: Chemical Abstract Service Number

(3) mg/m³ = milligrams per cubic metre of air at 20 °C and 101,3 kPa (760 mm mercury pressure).

(4) ppm = parts per million by volume in air (ml/m³).

(5) Measured or calculated in relation to a reference period of eight hours.

(6) Substantial contribution to the total body burden via dermal exposure possible.

(7) Inhalable fraction; if hardwood dusts are mixed with other wood dusts, the limit value shall apply to all wood dusts present in that mixture.

MEASURES TO BE TAKEN BY THE EMPLOYER TO PREVENT OR LIMIT EXPOSURE TO CARCINOGENS AND MUTAGENS

1. Limitation of the quantities of a carcinogen or mutagen at the place of work.
2. Keeping as low as possible the number of workers exposed or likely to be exposed,
3. Design of work processes and engineering control measures so as to avoid or minimise the release of carcinogens or mutagens into the place of work.
4. Evacuation of carcinogens or mutagens at source, local extraction system or general ventilation, all such methods to be appropriate and compatible with the need to protect public health and the environment.
5. Use of existing appropriate procedures for the measurement of carcinogens or mutagens, in particular for the early detection of abnormal exposures resulting from an unforeseeable event of an accident.
6. Application of suitable working procedures and methods.
7. Collective protection measures.
8. Where exposure cannot be avoided by other means, individual protection measures taken on their own or together with collective protection measures.
9. Hygiene measures, including in particular regular cleaning of floors, walls and other surfaces.
10. Information for workers.
11. Demarcation of risk areas and use of adequate warning and safety signs including no smoking signs in areas where workers are exposed or likely to be exposed to carcinogens or mutagens.
12. Drawing up plans to deal with emergencies likely to result in abnormally high exposure.
13. Means of safe storage and disposal of waste by workers, including the use of sealed and clearly and visibly labelled containers.

USEFUL SOURCES OF INFORMATION

MCA PUBLICATIONS

MCA Marine Guidance Note - MGN 20 - Implementation of EC Directive 89/391: Merchant Shipping and Fishing Vessels (Health and Safety at Work) Regulations 1997 - a copy of this MGN can be found on the MCA Website by using the following link <http://www.mcga.gov.uk/c4mca/mcga-guidance-regulation/mnotices/mcga-mgn.htm> and then scrolling down to MGN 20) or can be obtained from MCA's distribution agents - Mail Marketing (Scotland) Limited at the following address:-

Mail Marketing (Scotland) Limited
42 Methil Street
Glasgow
G14 0SZ

Tel: 011 5901 3336

Fax: 011 5901 3334

E-mail: mca@promo-solution.com

Code of Safe Working Practices for Merchant Seafarers - copies of this document are required to be carried on board all UK registered ships except fishing vessels. A "read only" copy can also be found on the MCA Website at <http://www.mcga.gov.uk/c4mca/mcga-shs-coswp2007.pdf>. Copies can also be purchased from The Stationery Office at the following address:-.

The Stationery Office
PO Box 29
Norwich
NR 3 1GN

Tel: 0870 600 5522

Fax: 0870 600 5533

E-mail: customer.services@tso.co.uk

Web: www.tso.co.uk

HSE PUBLICATIONS

Approved supply list - Information approved for the classification and labelling of substances and preparations dangerous for supply - Chemicals (Hazard Information and Packaging for Supply) Regulations 2002 - ISBN 0 7176 2368 8

Approved classification and labelling guide - Chemicals (Hazard Information and Packaging for Supply) Regulations 2002 - Guidance on Regulations - ISBN 0 7176 2369 6

Occupational exposure limits. Containing the list of maximum exposure limits and occupational exposure standards for use with the Control of Substances Hazardous to Health Regulations. - ISBN 0 7176 2083 2

Biological monitoring in the workplace. A guide to its practical application to chemical exposure. - ISBN 0 7176 1279 1

Seven steps to successful substitution of hazardous substances - ISBN 0 7176 0695 3

Monitoring strategies for toxic substances - ISBN 0 7176 1411 5

The above HSE documents can be obtained thorough good booksellers or from:

HSE Books
PO Box 1999
Sudbury
Suffolk
CO10 2WA

Tel : 01787 881165

Fax: 01787 313995

Further information on HSE priced and free publications can be found on HSE Books website at "www.hsebooks.co.uk". Free leaflets can be downloaded from HSE's main website at "www.hse.co.uk".

NOTE - The above list is not exhaustive and further useful information may be obtainable from other sources. The Internet may prove useful in this regard as it may be possible to trace information on particular suppliers or substances via that medium.