



# Exposure limits for air diving operations

## Diving Information Sheet No 5

### Introduction

1 This information sheet is part of a series providing guidance on diving at work. It replaces diving safety memorandum DSM 2/1990. The remaining DSMs have either been replaced by other diving information sheets, or were cancelled when the Diving at Work Regulations came into force on 1 April 1998.

2 The sheet contains guidance on the maximum time that a diver using air should spend under water.

### Exposure limits for air diving operations

3 HSE's policy is to recommend that diving using air should be organised in such a way that the planned bottom times\* do not exceed the limits outlined in Table 1.

4 If a nitrox breathing mixture is being used, you can find out the maximum exposure by entering the equivalent air depth of the maximum dive depth in the table below.

**Table 1** Maximum bottom time limitation for surface decompression, in-water decompression, and transfer under-pressure decompression diving

Depth		Bottom time limits (minutes)	
Metres	Feet	Transfer under-pressure	Surface decompression and in-water decompression
0-12	0-40	240	240
15	50	240	180
18	60	180	120
21	70	180	90
24	80	180	70
27	90	130	60
30	100	110	50
33	110	95	40
36	120	85	35
39	130	75	30
42	140	65	30
45	150	60	25
48	160	55	25
51	170	50	20

\* *Bottom time*: the total elapsed time from when the diver is first exposed to a pressure greater than atmospheric, ie when leaving the surface, or on the start of pressurisation when a closed bell is employed in the observation mode, to the time (next whole minute) that the diver begins decompression (measured in minutes).

### Further reading

*Commercial diving projects offshore. Diving at Work Regulations 1997. Approved Code of Practice L103* HSE Books 1998 ISBN 978 0 7176 1494 3

*Commercial diving projects inland/inshore. Diving at Work Regulations 1997. Approved Code of Practice L104* HSE Books 1998 ISBN 978 0 7176 1495 0

*Recreational diving projects. Diving at Work Regulations 1997. Approved Code of Practice L105* HSE Books 1998 ISBN 978 0 7176 1496 7

*Media diving projects. Diving at Work Regulations 1997. Approved Code of Practice L106* HSE Books 1998 ISBN 978 0 7176 1497 4

*Scientific and archaeological diving projects. Diving at Work Regulations 1997. Approved Code of Practice L107* HSE Books 1998 ISBN 978 0 7176 1498 1

*Diving at Work Regulations 1997* SI 1997/2776 The Stationery Office 1997 ISBN 0 11 065170 7

*Are you involved in a diving project at work? A brief guide to complying with health and safety law* Leaflet HSE Books 2009 (single copy free or priced packs of 10 ISBN 978 0 7176 6366 8)

## **Further information**

HSE priced and free publications can be viewed online or ordered from [www.hse.gov.uk](http://www.hse.gov.uk) or contact HSE Books, PO Box 1999, Sudbury, Suffolk CO10 2WA  
Tel: 01787 881165 Fax: 01787 313995  
Website: <http://books.hse.gov.uk> (HSE priced publications are also available from bookshops).

For information about health and safety ring HSE's Infoline  
Tel: 0845 345 0055 Fax: 0845 408 9566 Textphone: 0845 408 9577 e-mail: [hse.infoline@natbrit.com](mailto:hse.infoline@natbrit.com) or write to HSE Information Services, Caerphilly Business Park, Caerphilly CF83 3GG.

**This leaflet contains notes on good practice which are not compulsory but which you may find helpful in considering what you need to do.**

© *Crown copyright* This publication may be freely reproduced, except for advertising, endorsement or commercial purposes. First published 02/98. Please acknowledge the source as HSE.