



# 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 The remaining DSMs have either been replaced by other diving information sheets, or were cancelled when the Diving at Work Regulations came into force on 1 April 1998.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**

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

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