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Granular carbon dioxide (CO_2) absorbent material for life support, diving, hyper- and hypobaric applications – Specification

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Contents

Summary of pages

This document comprises a front cover, an inside front cover, pages i to ii, pages 1 to 14, an inside back cover and a back cover.

Foreword

Publishing information

This British Standard is published by BSI Standards Limited, under licence from The British Standards Institution, and came into effect on 31 July 2015. It was prepared by Subcommittee PH/4/7, *Underwater breathing apparatus*, under the authority of Technical Committee PH/4, *Respiratory protection*. A list of organizations represented on this committee can be obtained on request to its secretary.

Presentational conventions

The provisions of this standard are presented in roman (i.e. upright) type. Its requirements are expressed in sentences in which the principal auxiliary verb is "shall".

Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.

Requirements in this standard are drafted in accordance with *Rules for the structure and drafting of UK standards*, subclause **J.1.1**, which states, "Requirements should be expressed using wording such as 'When tested as described in Annex A, the product shall ...'". This means that only those products that are capable of passing the specified test will be deemed to conform to this standard.

Contractual and legal considerations

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard cannot confer immunity from legal obligations.

Introduction

Granular and pelleted carbon dioxide (CO_2) absorbents are used in a variety of life-support, diving, hyper- and hypobaric applications. The type and characteristics of absorbents vary dependent upon the intended use, differences in manufacturing techniques and chemical composition.

This standard provides requirements and test methods for carbon dioxide absorbents, and designations for such absorbents. This allows users to select appropriate materials for their intended application.

1 Scope

This British Standard gives requirements and test methods for granular and pelleted carbon dioxide absorbent materials.

NOTE For the purposes of this standard, the term "granular" includes both granular and pelleted material.

It is applicable to granular carbon dioxide absorbents intended for use in life-support applications including re-breathing apparatus of the surface and underwater, hyperbaric, and hypobaric applications.

It excludes granular and pelleted carbon dioxide absorbents intended for use in applications in medical anaesthesiology, materials that also generate oxygen, and monolithic pre-formed materials or those embedded within a polymer matrix.

2 Normative references

BS ISO 3310-1, *Test sieves – Technical requirements and testing Part 1: Test sieves of metal wire cloth*

3 Terms, definitions and abbreviations

3.1 Terms and definitions

For the purposes of this British Standard, the following terms and definitions apply.

3.1.1 activity time

time (in minutes) that a carbon dioxide absorbent material can maintain an effluent carbon dioxide level less than a given value

3.1.2 granule/granular material

granular or pelleted material

3.1.3 friability

propensity to form dust

3.1.4 indicator

material that changes colour as an absorbent is used

3.2 Abbreviations

S-H	Small soda lime, high-activity
S-L	Small soda lime, low-activity
L-H	Large soda lime, high-activity
L-L	Large soda lime, low-activity