

ISO/~~DIS~~**FDIS** 20480-5: ~~2023~~**(E)**

~~DATE: 2023-04-17~~

ISO-/TC 281

Secretariat:-JISC

Date: 2023-08-08

Fine bubble technology— General principles for usage and measurement of fine bubbles—

**Part-5:
Shelled bubble vocabulary**

iteh Standards
(<https://standards.iteh.ai>)
Document Preview

ISO/FDIS 20480-5

<https://standards.iteh.ai/catalog/standards/sist/234b2d6f-6cb4-4968-83ff-c42fbc25c4b/iso-fdis-20480-5>

FDIS stage

© ISO 2023

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ~~ISO's~~ISO's member body in the country of the requester.

ISO ~~Copyright Office~~copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: + 41 22 749 01 11

~~Email:~~ copyright@iso.org

~~E-mail:~~ copyright@iso.org

~~Website:~~ www.iso.orgwww.iso.org

Published in Switzerland.

iTeh Standards
(<https://standards.iteh.ai>)
Document Preview

ISO/FDIS 20480-5

<https://standards.iteh.ai/catalog/standards/sist/334b2d6f-6cb4-4968-83ff-c42fbc25c4b/iso-fdis-20480-5>

iTeh Standards
(<https://standards.iteh.ai>)
Document Preview

[ISO/FDIS 20480-5](https://standards.iteh.ai/catalog/standards/sist/334b2d6f-6cb4-4968-83ff-c42fbc25c4b/iso-fdis-20480-5)

<https://standards.iteh.ai/catalog/standards/sist/334b2d6f-6cb4-4968-83ff-c42fbc25c4b/iso-fdis-20480-5>

Contents

Foreword	vi
Introduction	vii
Part 5: Shelled bubble vocabulary	1
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
3.1 Terms related to shelled bubble	1
3.2 Terms related to shelled bubble categorization	5
3.3 Terms related to generation and characterization of shelled bubbles	8
Index	9

Foreword — 1

Introduction — 2

1 Scope	3
2 Normative references	3
3 Terms and definitions	3
3.1 shelled bubble — 3	
3.2 shelled fine bubble — 4	
3.3 shelled ultrafine bubble — 4	ISO/FDIS 20480-5
3.4 shelled microbubble — 4	https://standards.itech.ai/catalog/standards/sist/334b2d6f-6cb4-4968-83ff-c42fbc25c4b/iso-fdis-20480-5
3.5 organic shell — 4	
3.6 inorganic shell — 4	
3.7 hybrid shell — 4	
3.8 monolayer shell — 5	
3.9 double layer shell — 5	
3.10 multilayer shell — 5	
3.11 shell interface — 5	
3.12 shell thickness — 5	
3.13 shell shape — 5	
3.14 insoluble gases in shelled bubble — 5	

3.15 soluble gases in shelled bubble 5

3.16 zeta potential of shelled bubble 5

3.17 shelled bubble size half-life stability 6

3.18 shelled bubble number half-life stability 6

3.19 lipid shell 6

3.20 polymer shell 6

3.21 protein shell 7

3.22 surfactant shell 7

3.23 gas-filled structures/particles dispersed in liquids 7

3.24 bioinert gases 7

3.25 bioactive gases 7

4 Categorization 7

4.1 soft shell 7

4.2 hard shell 7

4.3 cross-linked shell 8

4.4 noncross-linked shell 8

5 Categorization 7

5.1 soft shell 7

5.1 hard shell 7

5.1 cross-linked shell 7

5.1 noncross-linked shell 7

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at www.iso.org/patents. ISO shall not be held responsible for identifying any or all such patent rights.

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

-This document was prepared by Technical Committee ISO/TC 281, *Fine bubble technology*.

A list of all parts in the ISO 20480 series can be found on the ISO website.

-Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.