
**Diesel engines — NO_x reduction agent
AUS 32 —**

**Part 3:
Handling, transportation and storage**

*Moteurs diesel — Agent AUS 32 de réduction des NO_x —
Partie 3: Manipulation, transport et stockage*



PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

This document is a preview generated by EVS



COPYRIGHT PROTECTED DOCUMENT

© ISO 2008

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

Contents

Page

Foreword.....	iv
1 Scope	1
2 Normative references	1
3 Terms and definitions.....	1
4 General requirements and recommendations	2
4.1 Requirements for the use of materials compatible with AUS 32	2
4.2 Physical conditions during transportation and storage.....	3
4.3 Cleanness of surfaces in contact with AUS 32.....	4
4.4 Recommendation on further properties	4
5 Quality assurance	4
5.1 General.....	4
5.2 Sampling.....	5
5.3 Testing	5
5.4 Procedures for product release and handling of non-conforming product	5
5.5 Quality monitoring	6
6 Procedures for handling of containers and equipment.....	7
6.1 General.....	7
6.2 Single use non-bulk containers	7
6.3 Dedicated bulk operation	7
6.4 Non-dedicated bulk operation	8
Bibliography	9

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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 22241-3 was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 5, *Engine tests*.

ISO 22241 consists of the following parts, under the general title *Diesel engines — NO_x reduction agent AUS 32*:

- *Part 1: Quality requirements*
- *Part 2: Test methods*
- *Part 3: Handling, transportation and storage*
- *Part 4: Refilling interface*

Diesel engines — NO_x reduction agent AUS 32 —

Part 3: Handling, transportation and storage

1 Scope

This part of ISO 22241 describes best practice recommendations and requirements for handling, transportation and storage of NO_x reduction agent AUS 32 (aqueous urea solution), specified in ISO 22241-1. These recommendations and requirements are necessary to preserve the specified quality of AUS 32 from any point of production to the point where it is filled into the onboard tank of the vehicle, in order to ensure the proper function of the selective catalytic reduction (SCR) converter systems.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. The latest edition of the referenced documents (including any amendments) applies.

ISO 22241-1:2006, *Diesel engines — NO_x reduction agent AUS 32 — Part 1: Quality requirements*

ISO 22241-2:2006, *Diesel engines — NO_x reduction agent AUS 32 — Part 2: Test methods*

3 Terms and definitions

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

3.1

shelf life

period of time starting with the completion of the production of the batch in which AUS 32, stored under specific conditions, remains within the specifications defined in ISO 22241-1:2006, Table 1

3.2

production batch of AUS 32

quantity of AUS 32 produced at one operation at a site where the product has (last) been physically or chemically modified to reach compliance with the specifications defined in ISO 22241-1:2006, Table 1

NOTE Mixing of AUS 32 volumes does not constitute a physical or chemical modification, so long as the quality of the volumes before mixing complies with the specifications given in ISO 22241-1.

3.3

bulk operation

handling of AUS 32 in large containers

NOTE Examples of large containers are road tankers, rail cars, storage tanks and tank vessels.

3.4

packaged shipment

handling of AUS 32 in small containers

NOTE Examples of small containers are drums, cans, bottles, intermediate bulk containers (IBCs) and totes.