Irish Standard
I.S. EN ISO 21058:2021

Road vehicles - Dimethyl Ether (DME) refuelling connector (ISO 21058:2019)

I.S. EN ISO 21058:2021

Incorporating amendments/corrigenda/National Annexes issued since publication:

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National Foreword

I.S. EN ISO 21058:2021 is the adopted Irish version of the European Document EN ISO 21058:2021, Road vehicles - Dimethyl Ether (DME) refuelling connector (ISO 21058:2019)

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

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 21058

October 2021

ICS 43.060.40

English Version

Road vehicles - Dimethyl Ether (DME) refuelling connector (ISO 21058:2019)

Véhicules routiers - Connecteur de remplissage en Dimethyl Ether (DME) (ISO 21058:2019)

Straßenfahrzeuge - Dimethylether (DME) Nachfüllstutzen (ISO 21058:2019)

This European Standard was approved by CEN on 13 September 2021.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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European foreword

The text of ISO 21058:2019 has been prepared by Technical Committee ISO/TC 22 "Road vehicles" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 21058:2021 by Technical Committee CEN/TC 301 "Road vehicles" the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by April 2022, and conflicting national standards shall be withdrawn at the latest by April 2022.

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

This document has been prepared under a Standardization Request given to CEN by the European Commission and the European Free Trade Association.

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 21058:2019 has been approved by CEN as EN ISO 21058:2021 without any modification.

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I.S. EN ISO 21058:2021

INTERNATIONAL STANDARD

ISO 21058

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Road vehicles — Dimethyl Ether (DME) refuelling connector

Véhicules routiers — Connecteur de remplissage en Dimethyl Ether (DME)

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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 documents 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).

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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 22, *Road vehicles*, Subcommittee SC 41, *Specific aspects for gaseous fuels*.

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.

Introduction

This document was developed to use for the newly produced Dimethyl Ether vehicle fuelling nozzles and receptacles only. As such, it applies to nozzles and receptacles used in the Dimethyl Ether fuelling system and not to the system.

A nozzle meeting the requirements of this document will be functionally compatible from a safety and performance perspective with all listed receptacles of compatible profile and system pressure. Similarly, a receptacle meeting the requirements of this document will be functionally compatible from a safety and performance perspective with all listed nozzles of compatible profile and system pressure.

As there may eventually be many different kinds of nozzles and receptacles available from a variety of manufacturers which, for safety reasons, should all be compatible with each other, this document specifies one standardized receptacle profile. This standard profile incorporates the design specifications (mating materials, geometry and tolerances) which may be considered when evaluating if a submitted nozzle or receptacle meets the requirement of this document.

Road vehicles — Dimethyl Ether (DME) refuelling connector

1 Scope

This document applies only to Dimethyl Ether refuelling connectors hereinafter referred to as devices, constructed entirely of new, unused parts and materials. Dimethyl Ether refuelling connectors consist of the following components, as applicable:

a) Nozzle (mounted on dispenser side).

b) Receptacle (mounted on vehicle).

This document applies to devices which use Dimethyl Ether as fuel, hereinafter referred to in this document as D15 [see 9.1 c)].

This document applies to devices with standardised mating components.

This document applies to connectors which prevent Dimethyl Ether vehicles from being fuelled by fuel station dispensers for other gaseous fuels.

This document is applicable to: Dimethyl Ether in accordance with ISO 16861.

NOTE All references to pressures (kPa) throughout this document are considered gauge pressures unless otherwise specified.

2 Normative References

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 188, *Rubber, vulcanized or thermoplastic — Accelerated ageing and heat resistance tests*

ISO 1431-1, *Rubber, vulcanized or thermoplastic — Resistance to ozone cracking — Part 1: Static and dynamic strain testing*

ISO 1817, *Rubber, vulcanized or thermoplastic — Determination of the effect of liquids*

ISO 9227, *Corrosion tests in artificial atmospheres — Salt spray tests*

ISO 16861, *Petroleum products — Fuels (class F) — Specifications of dimethyl ether (DME)*

ASTM D4814*Standard Specification for Automotive Spark-Ignition Engine Fuel*

3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/