



Economic Commission for Europe**Inland Transport Committee****Working Party on the Transport of Dangerous Goods****111th session**

Geneva, 9–13 May 2022

Item 5 (a) of the provisional agenda

**Proposals for amendments to annexes A and B of ADR
construction and approval of vehicles****Standards for automotive electrical cable****Transmitted by the Government of the Netherlands on behalf of the
informal working group on electrified vehicles****Summary*

Executive summary: In 9.2.2.2 reference is made to standards ISO 6722 and ISO 14572 for automotive electrical cables. These standards will be replaced by a new series of standards.

Action to be taken: Introduce additional reference to the new standards to complement the existing ones.

Introduction

1. In sub-section 9.2.2.2 of ADR reference is made to standards for automotive electrical cable. The referenced standards ISO 6722 parts 1 and 2 and ISO 14572 will in the future be replaced by a new family of standards taking into account developments in technology.

Proposals

2. Amend the third paragraph of 9.2.2.2.1 to read (new wording underlined, deleted wording stricken through):

“The cables shall be in conformity with standard ISO 6722-1:2011+ Cor 01:2012 ~~or~~, ISO 6722-2:2013, ISO 19642-3:2019, ISO 19642-4:2019, ISO 19642-5:2019 or ISO 19642-6:2019.”

* A/76/6 (Sect.20), para 20.76.

3. Amend the third paragraph of 9.2.2.2.2 to read (new wording underlined):

“The additional protection is complied with if multicore cables in conformity with ISO 14572:2011, ISO 19642-7:2019, ISO 19642-8, ISO 19642-9 or ISO 19642:10:2019 are used or one of the examples in figures 9.2.2.2.2.1 to 9.2.2.2.2.4 below or another configuration that offers equally effective protection.”

Justification

4. Below the introduction in the standard ISO 19642-1 is reproduced:

“This document was prepared following a joint resolution to improve the general structure of the ISO automotive electric cable standards. This new structure adds more clarity and, by defining a new standard family, opens up the standard for future amendments.

Many other standards currently refer to ISO 6722-1, ISO 6722-2 and ISO 14572. These standards will stay valid at least until the next scheduled systematic review and will later be replaced by the ISO 19642 series.

For new automotive cable projects, customers and suppliers are advised to use the ISO 19642 series.”

5. The new family of standards currently contains the following parts:

ISO

19642 ROAD VEHICLES — AUTOMOTIVE CABLES -

<i>Title</i>	<i>Scope</i>
Part 1 <i>Vocabulary and design guidelines.</i>	This document defines terms in the field of cables applied in road vehicle general purpose applications, for use in the other parts of the ISO 19642 series.
Part 2 <i>Test methods.</i>	This document defines test methods for electrical cables in road vehicles, which are used in other parts of the ISO 19642 series.
Part 3 <i>Dimensions and requirements for 30 V a.c. or 60 V d.c. single core copper conductor cables.</i>	This document specifies the dimensions and requirements for single-core cables intended for general purpose vehicle applications where the nominal system voltage is less than or equal to 30 V a.c. or less than or equal to 60 V d.c.. It also applies to individual cores in multi-core cables.
Part 4 <i>Dimensions and requirements for 30 V a.c. and 60 V d.c. single core aluminium conductor cables.</i>	This document specifies the dimensions and requirements for single-core cables intended for general purpose vehicle applications where the nominal system voltage is less than or equal to 30 V a.c. or less than or equal to 60 V d.c.. It also applies to individual cores in multi-core cables.
Part 5 <i>Dimensions and requirements for 600 V a.c. or 900 V d.c. and 1 000 V a.c. or 1 500 V d.c. single core copper conductor cables.</i>	This document specifies the dimensions and requirements for single core cables intended for use in general purpose road vehicle applications where the nominal

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	system voltage is 600 V a.c. or 900 V d.c. and 1 000 V a.c. or 1 500 V d.c.. It also applies to the individual conductor cores used in multi core cables.
Part 6	<p><i>Dimensions and requirements for 600 V a.c. or 900 V d.c. and 1 000 V a.c. or 1 500 V d.c. single core aluminium conductor cables.</i></p> <p>This document specifies the dimensions and requirements for single core cables intended for use in general purpose road vehicle applications where the nominal system voltage is 600 V a.c. or 900 V d.c. and 1 000 V a.c. or 1 500 V d.c. It also applies to the individual conductor cores used in multi core cables.</p>
Part 7	<p><i>Dimensions and requirements for 30 v a.c. or 60 v d.c. round, sheathed, screened or unscreened multi or single core copper conductor cables.</i></p> <p>This document specifies the dimensions and requirements for multi or single core cables intended for use in road vehicle applications where the nominal system voltage is 30 V a.c. or 60 V d.c.. It also applies to individual cores in multi core and single core cables</p>
Part 8	<p><i>Dimensions and requirements for 30 v a.c. or 60 v d.c. round, sheathed, screened or unscreened multi or single core aluminium conductor cables.</i></p> <p>This document specifies the dimensions and requirements for multi or single core cables intended for use in road vehicle applications where the nominal system voltage is 30 V a.c. or 60 V d.c.. It also applies to individual cores in multi core cables.</p>
Part 9	<p><i>Dimensions and requirements for 600 v a.c. or 900 v d.c. and 1 000 v a.c. or 1 500 v d.c. round, sheathed, screened or unscreened multi or single core copper conductor cables.</i></p> <p>This document specifies the dimensions and requirements for multi or single core cables intended for use in road vehicle applications where the nominal system voltage is 600 V a.c. or 900 V d.c. and 1 000 V a.c. or 1 500 V d.c.. It also applies to individual cores in multi and single core cables.</p>
Part 10	<p><i>Dimensions and requirements for 600 v a.c. or 900 v d.c. and 1 000 v a.c. or 1 500 v d.c. round, sheathed, screened or unscreened multi or single core aluminium conductor cables.</i></p> <p>This document specifies the dimensions and requirements for multi or single core cables intended for use in road vehicle applications where the nominal system voltage is 600 V a.c. or 900 V d.c. and 1 000 V a.c. or 1 500 V d.c.. It also applies to individual cores in multi and single core cables.</p>
