

## S008 comments to be considered by the WC80 subcommittee

Item	Clause & page	S008 Text	Comment	Proposal	Resolution/comments
3	1.6, page 2 and Clause 3 Reference [1] Page 4	In this Standard the International System (SI) of units and symbols is used in accordance with Australian Standard AS ISO 1000 [1].  [1] AS ISO 1000:1998 The international System of Units (SI) and its application	AS ISO 1000:2008 adopted ISO 1000: 1992 but not including amdt 1 1998. Also, ISO 1000 was superseded by ISO 80000-1:2009 (which is still current), so I wonder about the relevance of the AS ISO 1000 standard and whether there are any material differences from ISO 80000-1?	Check the standard editions for relevance.	Public comment Need to check with SA.
5	4.1.2 Page 8	<b>Cable</b> An assembly of one or more <b>cable units</b> (e.g. pairs, quads, coaxial tubes, fibres) in an overall sheath. Note: The assembly may include such things as a shield, moisture barrier, filling compound, strengthener or bearer wire.	It is unclear what a cable is when it's defined in a circular fashion like this. What is a "cable unit"? It only leads to more questions. Suggest replacing the definition with the definition from IEC 151-12-38.	Replace the definition with the following: An assembly of one or more conductors and/or optical fibres, with a protective covering and possibly filling, insulating and protective material. Note: The assembly may also include other elements, for example a metallic shield, a moisture barrier, a strengthener or bearer wire. [Source: IEC 151-12-38 (mod)]	Public comment
6	4.1.9, page 9	Compliant An item that has been labelled in accordance with the <b>Telecommunications Labelling Notice</b> .	<ul style="list-style-type: none"> <li>It's not clear what "compliant" means. The term is only used in clause 5.4.1.3.4 (d) Note</li> </ul>	<ul style="list-style-type: none"> <li>Suggest deleting 4.1.9 and merge it with the note to 5.4.1.3.4 (d)</li> <li>If the term is to remain, then after "telecommunications labelling notice", add: "(see 5.2.1)"</li> </ul>	Public comment

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			<ul style="list-style-type: none"> <li>Also, the referenced document "Telecommunications Labelling Notice" isn't listed in clause 3 or the bibliography, however it's spelled out in clause 5.2.1. Suggest a cross reference.</li> </ul>		
7	4.1.10, Page 9	<p><b>Conduit</b>  A tube or pipe that physically accommodates cables.  Note: In this Standard, <b>conduit and pipe have the same meaning.</b>  See also 'Duct' and 'Trunking'</p>	<p>Would prefer to use the definition from the IEV 442-02-03 as per the proposal, since this is better understood internationally. Also, the note is essentially defining a normative meaning for "pipe" but in an informative note. However, it's unnecessary to include it in the note since it's in the definition itself.</p>	<p>Replace the definition with the following:  a part of a closed wiring system of generally circular cross section, such as a tube or a pipe, for insulated conductors and/or cables in electrical or communication installations, allowing them to be drawn in and/or replaced.  Note: See also "duct" and "trunking".  [Source: IEV 442-02-03 (mod)]</p>	Public comment
8	4.1.12, Page 9	<p><b>Cord</b>  A flexible cable with a minimum of one termination (e.g. on a plug).  Note: Cords are used for connection of moveable customer equipment or to afford flexibility, e.g. includes patch cords, fly leads and pigtailed.</p>	<p>The definition includes "a flexible cord" however it can be seen from 4.1.13 that this is defined as "cordage" so it is suggested to use the defined term.</p>	<p>Replace "a flexible cable" with "cordage" in the definition.</p>	Public comment
10	4.1.26, Page 11	<p><b>Jumper</b>  A cable unit or cable element without connectors, typically one to four twisted pairs, either unsheathed or sheathed, used</p>	<p>A jumper can also make interconnection between two or more cables without cross connection, so this definition appears to be inadequate.</p>	<p>Reword the definition as follows:  A short length of conductor or multiple conductors or optical fibres, not under mechanical tension, making a</p>	Public comment

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		to make a cross connection within a distributor.	Jumpers are usually short, but that is not conveyed in this definition. Suggest rewording in line with IEV 466-10-26.	connection between two separate sections of a line within a distributor. Note: the conductors may be sheathed or unsheathed. [Source: IEV 466-10-26 (mod)]	
11	4.1.30, Page 12	<p>Multidiscipline cable A cable that is intended to be used for an application other than telecommunications but excluding any cable normally used for distribution or connection of mains supply. Note: An example of a multidiscipline cable is a cable that may be used for telecommunications or may be used for such other things as—</p> <p>(a) emergency lighting (e.g. MIMS cable);</p> <p>(b) distribution or connection of ES1 or ES2 power (e.g. ‘figure 8’ twin conductor cable); or</p> <p>(c) control purposes (e.g. a travelling lift or hoist cable).</p> <p>Main Distribution Frame (MDF) A distributor that provides, or is intended to provide, an electrical termination point for a carrier’s lead-in cabling. Note: There may be more than one MDF within a building.</p>	<p>The first example used in this definition appears to go against the normative part of the definition. Therefore, it’s not clear how the multidiscipline cable is intended to differ from the hybrid cable of 4.1.24.</p> <p>The items (a), (b), (c) appear to be part of the note so should be intended with the note body text.</p> <p>The reference to ‘figure 8’ in note (b) can be removed, as other twin power cable configurations exist as well.</p> <p>See also 4.1.39 Special application cable.</p>	Clarify the difference between this item and hybrid cables (or merge them into one), and Check the editorial comments as per the comment column.	Public comment
12	4.1.35, Page 13	<p>Pigtail A length of metallic or optical fibre cordage with a connector</p>	The difference between a “cord” (4.1.12) and a “pigtail” is that the pigtail can have	Reword as follows: A short length of metallic or optical fibre cord with a connector fitted at	Public comment

Item	Clause & page	S008 Text	Comment	Proposal	Resolution/comments
		<p>fitted at one end only. The other end is free for terminating or splicing to customer equipment or customer cabling.</p>	<p>only one connector while the cord can have one or more connectors. So it appears that a pigtail is a subset of a cord. Rephrase the definition to reference the term for cord. The term “length of” is also unhelpful, as every cord has length, and nothing specific is specified or implied here. However also note that according to IEC 60332-1-2, a pigtail (optical in that case) can also be a “short length” of cord permanently attached to a “component” (which might or might not be a connector). Suggest harmonizing with but not adopting the IEC concepts.</p>	<p>one end only. The other end is free for terminating or splicing to customer equipment or customer cabling.</p>	
14	4.1.39, Page 13	<p><b>Special application</b> cable                      A cable that—                      (a) is intended to carry steady-state or change-of-state DC signals or AC signals less than 300 Hz between devices;                      (b) is a cable intended to carry an industrial data signalling protocol, e.g. RS232 or RS485;                      (c) is intended for multidiscipline use; or                      (d) is a hybrid cable.</p>	<p>How is this cable intended to be different to multidiscipline cable of 4.1.30 or hybrid cable of 4.1.24? It’s not clear why a third definition is needed. If the cable is intended for multidiscipline use per item (c), then shouldn’t it be a multidiscipline cable? And for item (d) “is a hybrid cable” applies to 4.1.24, doesn’t it?</p>	<p>Suggest deleting list item (c) “is intended for multidiscipline use;”, and also delete item (d) “is a hybrid cable”. Otherwise, please clarify the distinction of 4.1.39 with 4.1.30 and 4.1.24, i.e: normatively clarify what is “special” that’s not covered in the other two definitions.</p>	Public comment

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		<p>Note: A special application cable may include, but is not limited to—</p> <ul style="list-style-type: none"> <li>(a) a cable used for connection of telecommunications power (usually ES1) and associated status and alarm circuits;</li> <li>(b) a MIMS, EWIS or other fire detection or fire warning system cable;</li> <li>(c) a security or control system cable; or</li> <li>(d) a travelling lift or hoist cable.</li> </ul>			
15	5.2.3.2, Page 15	<p>Multidiscipline telecommunications connecting hardware Products designed for multidiscipline use that have permanent markings to distinguish their usage shall have their markings positioned so that they are likely to be visible when the products are installed. Note: This is to distinguish the cabling products used for telecommunications from those products used for hazardous circuits.</p>	<p>Clause 4.1.30 does not make it clear that multidiscipline cable is always hazardous, in fact 4.1.30 mentions ES1 and ES2, so it should only be needed to distinguish this hardware only in the case of ES3 use. Even in the case of ES3, it's not required in 5.2.3.2 to have a label. The clause only applies if the connecting hardware does have a label. Is this the intention?</p>	<p>See comments to consider the issues, and resolve if necessary.</p>	<p>Public comment</p>
16	5.3.1. Pages 15-16	<p>Colour Non-metallic conduit for underground use shall be—</p> <ul style="list-style-type: none"> <li>(a) coloured white; or</li> <li>(b) contain an indelible, durable, <b>continuous white stripe</b> which is</li> </ul>	<p>There does not appear to be a specification for the minimum size of the white stripe. It could be microscopic and not easily seen. Suggest applying a minimum width and/or a</p>	<p>See the comment.</p>	<p>Public comment</p>

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		<p>incorporated as part of the manufacturing process and is not painted on or applied over the surface of a pre-fabricated conduit.</p>	<p>recommended % of the outside surface diameter of the conduit.</p>		
17	5.3.31 page 16	<p>General Non-metallic conduit for underground use shall be legibly and durably marked 'COMMUNICATIONS' at intervals of no less than 1 m and no greater than 3 m. Conduit shall not include the word 'ELECTRICAL' or any other marking that may be confusing or misleading. Note 1: Conduit fittings such as bends and joiners do not need to be marked. Note 2: Suitable methods of marking include stamping, moulding, printed labels and direct printing.</p>	<p>Is it necessary to prescribe a minimum spacing here? Suggest deleting the minimum requirement.</p>	<p>Delete the words "no less than 1 m and"</p>	Public comment
24	5.4.1.4.1 Page 19	<p>Insulation Where an earthing/bonding bar or terminal is provided other than for the purpose of Clause 5.4.1.2.1, it shall be insulated from any conductive material of the enclosure, backmount or frame to withstand a potential difference of 1.5 kV a.c. (50 Hz) for 60 s.</p>	<p>The frequency of the a.c. withstand voltage is irrelevant, as the peak value is always the same for a sinusoidal waveform. Suggest deleting "(50 Hz)". Also consider permitting a peak d.c. voltage test as an alternative (i.e. 2121 Vdc)</p>	<p>Reword the text as follows: Insulation Where an earthing/bonding bar or terminal is provided other than for the purpose of Clause 5.4.1.2.1, it shall be insulated from any conductive material of the enclosure, backmount or frame to withstand a potential difference of 1.5 kV a.c. (or 2121 V d.c.) for 60 s.</p>	Public comment

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26	5.4.2.2 Page 20	Security The MDF <b>shall</b> have provision for securing with a key, lock or tool.	If the MDF is to be installed in a restricted access area, why would it need a key/lock or tool?	Reword as follows: Security An MDF that is not intended to be installed in a restricted access area shall have provision for securing with a key, lock or tool.	Public comment
31	5.6.11.3	Operating Temperature A cable shall have a <b>minimum continuous operating temperature of 60 °C</b> . Note: Provision of remote power over cables <b>may increase the operating temperature above ambient</b> .	The operating temperature should be a minimum rating, not an operating objective.  Also, the note should indicate that the remote power feeding operating temperature should not exceed the temperature rating of the cable.	Reword as follows: Operating Temperature A cable shall have a minimum continuous operating temperature <b>rating</b> of 60 °C. Note: Provision of remote power over cables may increase the operating temperature above ambient, <b>however the operating temperature of the conductors must be kept below the temperature rating of the cable, taking in to account environment conditions</b> .	Public comment
32	5.6.12.2 Page 28	Conductor composition Conductors in metallic cordage <b>should be</b> of stranded <b>or tinsel conductor</b> construction when frequent movement of the cordage is anticipated.	Tinsel conductors are unsuitable for carrying remote power energy. This is the only place in the standard where tinsel is mentioned. Should it be deprecated (deleted)? If it is to be retained, then consider adding a note about not using it for power delivery. Also, solid core conductors are always unsuitable for use where flexibility of movement is a requirement, so please consider changing “should” to “shall”.	Reword as follows: Conductor composition Conductors in metallic cordage <b>shall be</b> of stranded or tinsel conductor construction when frequent movement of the cordage is anticipated.  <b>Note: tinsel conductors are generally deprecated as they are unsuitable for use with power feeding applications.</b>	Public comment

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33	5.6.13 Pages 28-29	<p>5.6.13.1 General requirements A cord with metallic conductors shall comply with the following Clauses:</p> <p>5.6.2 Conductor and optical fibre identification</p> <p>5.6.4 Flammability</p> <p>5.6.5 UV resistance (if intended for use external to a building)</p> <p>5.6.6.1 Conductor composition</p> <p>5.6.6.2 Electrical withstand voltage</p> <p>5.6.6.5 Insulation resistance</p> <p>5.6.7 Metallic shield (if applicable)</p> <p>5.6.13.2 Cords exceeding a length of 10 m A cord with metallic conductors that exceeds a length of 10 m shall comply with Clause 5.6.13.1 and the following Clauses:</p> <p>5.6.3 Insulation and sheath material</p> <p>5.6.6.3 Mutual capacitance (if intended for use as a telephone cord)</p> <p>5.6.6.4 Capacitance unbalance (if intended for use as a telephone cord)</p>	<p>These two subclauses are not needed here, since Cords are defined as cordage plus at least one termination. These two subclauses merely repeat the requirements for cordage, which is already outlined in 5.6.12, so all that's needed in 5.6.13 is the cord anchorage or strain relief of 5.6.13.3.</p>	<p>Delete all 5.6.13.1 and 5.6.13.2 and replace 5.6.13.1 with 5.6.13.3</p>	<p>Public comment</p>