

American Brush Manufacturers Association Response to Comments on Proposed ANSI B165.1 R2010

<u>Clause</u>	<u>Comment</u>	<u>Rationale</u>	<u>Suggested revision</u>		<u>ABMA Response</u>
1	The scope does not specify rotating brushes only.	Scope must state the range of brushing machines covered by the standard.	Exclude linear reciprocating brushing machines, random orbit brushing machines and their accessory brushes from the standard in the scope or consider the addition of linear reciprocating brushing tools, random orbit brushing machines.	NO	The Scope does define the type of brushes and it also states what applications are not covered by this standard. We do not want to limit this standard based on geometry or paths of the product but by the intended use of the brush. This has been clearly defined in the scope.
1	Remove “all”	The standard does not apply to all as there are exceptions in paragraph 2 of this clause.	It embraces all configurations of brushing tools whose functional performance is accomplished by power-driven operation.	OK	Approve
3.1.8	Add reference to no-load	To provide consistency with power tool standards. No-load speed is the term used to indicate free speed.	Synonymous with maximum safe rpm (free rotation <u>or no-load speed</u>).	OK	Approve

American Brush Manufacturers Association Response to Comments on Proposed ANSI B165.1 R2010

3.1.9	Combine common terms by moving 3.1.19 and 3.1.20 into this definition and reordering terms while preserve current text.	Face width and operating face width are associated with brush face and should be together for added clarity.	<p>3.1.9 operating face width: The width of the face of the brush, measured at operating speed.</p> <p>brush face: The surface of the brush that does the brushing as viewed from the ends of the filaments.</p> <p><u>3.1.9.1 face width: The axial dimension at the outside diameter of a brush when it is measured in its static condition.</u></p> <p><u>3.1.9.2 operating face width: The width of the face of the brush, measured at operating speed.</u></p>	OK	Approve
3.1.13	Revise description of crimped wire	Make consistent with description of 3.1.10.1	Wire that has been passed through gears or other devices to impart a <u>corrugated appearance configuration similar to a sine waveform</u> to the wire.	OK	Approve

American Brush Manufacturers Association Response to Comments on Proposed ANSI B165.1 R2010

3.1.19	Delete as part of work for 3.1.9	If accepted, this will be incorporate into 3.1.9	3.1.19 face width: The axial dimension at the outside diameter of a brush when it is measured in its static condition.	OK	Approve
3.1.20	Delete as part of work for 3.1.9	If accepted, this will be incorporate into 3.1.9	3.1.20 brush face: The surface of the brush that does the brushing as viewed from the ends of the filaments.	OK	Approve

American Brush Manufacturers Association Response to Comments on Proposed ANSI B165.1 R2010

3.1.23	Remove user eye protection text	This is a requirement that is being shown in a definition. It should be incorporated into 7.5	<p>3.1.23 safety shield: Fixed or adjustable transparent visor or eye shield that is connected to the brushing machine, which provides additional safety for the operators while permitting them to visually observe the brushing being accomplished. In addition to fixed or adjustable transparent visors or eye shields that are attached to a machine, brush operators and others in the area of the brushing operation shall wear safety goggles, full face shields over safety glasses with side shields, or other forms of personal eye protection as described in ANSI Z87.1.</p>	NO	<p>We are consistently fighting the battle of getting people to wear eye protection. ABMA holds the opinion the more we state it the higher the likely hood that users will wear eye protection.</p>
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American Brush Manufacturers Association Response to Comments on Proposed ANSI B165.1 R2010

3.1.21 to 3.1.26	Renumber as part of work for 3.1.9	If accepted, the deletion of 3.1.19 and 3.1.20 will required these clauses to be renumbered	3.1.21 <u>19</u> 3.1.22 <u>20</u> 3.1.23 <u>21</u> 3.1.24 <u>22</u> 3.1.25 <u>23</u> 3.1.26 <u>24</u>	OK	Approve
4.3	Reword to remove option.	The term “when sufficient space if available” allows some to make a decision to not provide this info, which should be mandatory.	When sufficient surface space is available, e Each brush shall be marked in a permanent manner to show the maximum safe free speed in revolutions per minute; the brush also <u>and</u> carry the words, “Wear eye protection,” when sufficient space is available.	NO	There are many instances that the product cannot be marked with anything. Most internal tube brushes cannot be marked.

American Brush Manufacturers Association Response to Comments on Proposed ANSI B165.1 R2010

5.1	Revise “and” to read “or” to avoid possible confusion on applicable standard	The “and” in the paragraph may imply a tool needs to meet both UL 60745 and UL 987, when in fact you would only need to comply with UL 60745 for portable tool and UL 987 for transportable tools.	It shall be the brush machine builder’s responsibility to indicate the maximum rpm of the machine and the size of the brush to be used on the machine based on the requirements for guarding the machine as described in ANSI <u>B7.1</u> , ANSI/UL 60745 and <u>or</u> ANSI/UL 987, <u>as applicable</u> .	OK	Approve
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American Brush Manufacturers Association Response to Comments on Proposed ANSI B165.1 R2010

6.1	Remove specific inspection language and send them to clause 7	The list of inspection items is not complete. Clause 7.2 and 7.4 cover the issue in more details. Directing the user there will offer more complete guidance and consolidate the messages into the same clauses.	Immediately before mounting, all brushes shall be closely inspected according to 7.2 and 7.4 to make sure they are suitable for use. have not been damaged in transit, storage, or otherwise (see 9.2 and 9.3). the spindle speed of the machines shall be checked before mounting the brush to be certain that it does not exceed the maximum safe free speed marked on the brush or the manufacturer's recommended maximum safe free speed if the brush is of such a size or configuration that marking is not feasible.	OK	Approve
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American Brush Manufacturers Association Response to Comments on Proposed ANSI B165.1 R2010

7.2	Add additional inspection criteria consistent with 6.3 to the end of this clause	Clause 6 covered mounting inspections and considers the surface condition of the mounting parts. This is also applicable to the brush inspection before use.	<u>All contact surfaces of brushes, shall be flat and free of foreign matter that could result in uneven pressure. Brushes shall be checked periodically to see that they are not distorted or burred so as to cause improper functioning.</u>	OK	Approve
7.5			Design, construction, testing, and use of devices for eye and face protection shall be in accordance with ANSI Z87.1. <u>Brush operators and others in the area of the brushing operation shall wear safety goggles, full face shields over safety glasses with side shields, or other forms of personal eye protection designed, constructed and tested in accordance with ANSI Z87.1.</u>	OK	Approve

American Brush Manufacturers Association Response to Comments on Proposed ANSI B165.1 R2010

7.7	Revise to add language that guard must comply with applicable tool standards	A guard specified for a tool must comply with the applicable guarding requirements for that class of tool as described in either UL60745 or UL 987	Because rotating brushes <u>can be</u> are inherently hazardous, the operator, as well as in proximity to the brushing station, shall be protected by safety guards <u>meeting the requirements of the applicable brushing machine (power tool) standard (see 5.1)</u>	OK	Approve, with additional changes. “are inherently” means they are in all forms of use and that is not true. We recommend “can be”.
7.7.1	Revise to add language that guard must comply with applicable tool standards.	A ‘bench’ type machine shall comply with UL 987.	<u>Machines known as bench or pedestal grinders shall comply with ANSI B7.1 and/or UL 987.</u>	OK	Approve
7.7.3	To acknowledge guarding requirements of end product safety standards.	End use product standards already have sufficient guarding requirements and this standard does not intent to add additional requirements.	<u>When the brushing machine is not covered by and end use product safety standard (ref. 5.1),</u> interlocking safety guards shall be considered if fixed safety guards are not practical.	OK	Approve, with typo change
7.8	Clarify “operating speed”	Operating speed should be identified as a full no-load rotating speed.	<u>After the machine has been turned on, the brush shall be run at the recommended brush manufacturers rated no load speed or at the brush machines</u>	NO	Operating speed is not always full no-load rotating speed. ABMA interprets full no load rotating speed as MSFS. Brushes should be run at operating speed as determined by the brush manufacturer. In many cases the operating speed is less than

American Brush Manufacturers Association Response to Comments on Proposed ANSI B165.1 R2010

			<u>manufacturers no load operating speed, whichever is lower, for at least one minute before applying to work to dislodge loose particles.</u>		the MSFS, sometimes significantly.
7.8	Exclude brushes and machines from applications where hazardous dusts or particles may become airborne.	Brushes may allow for the release of friable and respirable particles that may cause illness of the brush and machine user.	<u>Restrict use of brushes and machines from brushing known hazardous materials or systems containing asbestos, etc. unless done in accordance with 29CFR1926.1101</u>	NO	ABMA is concerned that this proposed comment is too specific as there are plenty of non-hazardous materials that can be made hazardous to the user and so we should not single out known hazardous materials or systems containing asbestos, etc.
8.3	Test time for test specified is too short and should be 1 hour, not 30 seconds.	30 seconds may show acute defects in manufacturing (i.e. loose wires or connections) but may not show long term fatigue failures due to inadequate design. Other standards have adopted a 1 hour test time for validating designs, which has proven successful over time.	These brushes shall be speed-tested for a period of 30 seconds <u>1 hour</u> at the test speed, determined by multiplying the maximum safe free speed of the brushes by the minimum factor shown in Table.	NO	This is an ongoing disagreement between brush and power tool manufacturers. ABMA maintains that a 30 second test is more than adequate for testing, which has also proven successful over time.
9.3	Add clarity and consistency	Incorporate some text from 7.2 to add clarity	A typical defect that might be encountered on wire	OK	Agreed

American Brush Manufacturers Association Response to Comments on Proposed ANSI B165.1 R2010

		as rust will only apply to ferrous materials.	brushes is oxidation <u>rust (oxidation)</u> , <u>discoloration in the surface finish</u> caused by exposure to environmental conditions.		
E4.3	Remove “study” Add text to reference power tool manual as well.	The use of “study” adds text but may not increase meaning. If one were to read and understand, they have studied the text enough. If they study and do not understand, the study was not effective. Not only are the warnings on the brush and its instructions important but so are those in the tool manual. The standard references proper application of guarding in accordance with the tool manual in 7.7 so it is appropriate to send the user to this document as well.	All packages containing brushes should have a summary of the safety precautions given in this standard printed either on each package or on a card or slip placed inside the package. When placed inside the package, the package (or label on the package) shall be marked Warning: Read, study and understand all warnings and operating instructions on the enclosed safety slip and those provided with your power tool before using this brush.	OK	Approve as amended by ABMA. Leave the word “study” in as it adds emphasis on the need to read thoroughly. Someone may read and think they understand but do not. Study emphasizes additional time to read thoroughly.
E7.7.3	To acknowledge	End use product	<u>Add after heading:</u>	OK	Approve

American Brush Manufacturers Association Response to Comments on Proposed ANSI B165.1 R2010

	guarding requirements of end product safety standards. (consistent with revision suggested to 7.7.3)	standards already have sufficient guarding requirements and this standard does not intent to add additional requirements.	<u>When end product safety standards for brushing machines are available, such as those mentioned in 5.1, compliance with, their guarding requirements provides sufficient protection to the users of brushes.</u>		
Notes	Revise safety goggles to eye protection	More appropriate title as the eye protection used may not be goggles	<u>Eye protection</u> Safety goggles : Safety goggles or full face shields worn over safety glasses with side shields must be worn by all operators and others in the area of power brush operations. Comply with the requirements of ANSI Z87.1, “Occupational and Education Eye and Face Protection.”	OK	Approve