

STANDARDS AUSTRALIA

Amendment No. 2
to
AS 4454—2012
Composts, soil conditioners and mulches

REVISED TEXT

The 2012 edition of AS 4454 is amended as follows; the amendments should be inserted in the appropriate places.

SUMMARY: This Amendment applies to Clauses 1.4, 1.5.3, 3.2.1 and 5.2, Tables 3.1(A) and Appendices A, D, E, I and N.

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AMDT
No. 2
DEC
2018

Clause 1.4

Delete clause text and *replace* with the following:

The following documents are referred to in this Standard:

AS

3743 Potting mixes

5013.10 Part 10: Microbiology of food and animal feeding stuffs—Horizontal method for the detection of *Salmonella* spp. (ISO 6579:2002, MOD)

5013.15 Part 15: Microbiology of food and animal feeding stuffs—Horizontal method for the detection and enumeration of presumptive *Escherichia coli*—Most probable number technique

Animal and Plant Health Agency (APHA), Guidance on Composting and Biogas (Anaerobic Digestion) of Animal By-Products in Approved Plants. 2014.

National Resource Management Ministerial Council, *National Water Quality Management Strategy Guidelines for Sewage Systems Biosolids Management (2004)*

United States Environmental Protection Agency (US EPA), 40 CFR Part 503 Standards for the Use or Disposal of Sewage Sludge

AMDT
No. 2
DEC
2018

Clause 1.5.3

Line 3, *delete* ‘achieved’ and *replace* with ‘achieve’.

AMDT
No. 2
DEC
2018

Clause 3.2.1

Delete clause text, including notes, and *replace* with the following:

3.2.1 Pasteurization

Pasteurization occurs as a result of a time/temperature relationship. Any product supplied or described as ‘pasteurized’ shall have had the whole of its mass subjected to one of the following, depending on the risk embodied in the feedstock or raw material inputs:

- (a) *Lower risk materials* Where lower risk materials (including plant materials or vegetation) are used as feedstock, there shall be turning of outer material to the inside of the composting mass so the whole mass is subjected to a minimum of three turns with the internal temperature being maintained at a minimum of 55°C for three consecutive days or longer before each turn.

- (b) *Higher risk materials* Where higher risk materials (including manure, animal waste, food or grease trap wastes) are used as feedstock, a longer process is necessary to counter risk of reinfection by the outside of the pile when turned. For these higher risk materials, the core temperature of the compost mass shall be maintained at 55°C or higher for 15 days or longer, and during this period the composting mass shall be turned a minimum of five times, turning outer material to the inside of the composting mass, so the whole mass is subjected to the required temperature/process conditions.

NOTE: This is consistent with the standards for the use or disposal of sewage sludge (refer to US EPA 40 CFR Part 503 *Standards for the Use or Disposal of Sewage Sludge* and APHA *Guidance on Composting and Biogas (Anaerobic Digestion) of Animal By-Products in Approved Plants*).

- (c) An alternative process that guarantees the same level of pathogen reduction as specified for Grade P1 within *Guidelines for Sewage Systems Biosolids Management*. This process shall be confirmed by pathogen testing in accordance with Appendix D, Paragraph D5.4. The elimination of viable plant propagules shall be confirmed in accordance with the requirements in Appendix M.

NOTES:

- 1 Shredded garden organic materials and vermicast that have spent three days in a suitable invessel composting system, in which all materials contained within achieve a minimum of 55°C, or that have spent two to three weeks in well-managed turned composting masses, should meet pasteurization criteria, or other approved technology. Materials that are used soon after shredding will not meet these pasteurization criteria, and so are excluded from this Standard.
- 2 Examples of alternative processes (time/temperature requirements) that guarantee the same level of pathogen reduction as required by *Guidelines for Sewage Systems Biosolids Management* are specified in APHA *Guidance on Composting and Biogas (Anaerobic Digestion) of Animal By-Products in Approved Plants*.
- 3 The terms ‘low risk’ and ‘high risk’ refer to the risk that pathogens, phytotoxic compounds and plant propagules will be carried, in an active state, through to the finished compost. Natural materials with a high pathogen, phytotoxic compound and plant propagule content will take longer or hotter processing to ensure adequate reduction of pathogens, phytotoxic compounds and plant propagules.

AMDT
No. 2
DEC
2018

Table 3.1(A)

Sixteenth row, *after* the text ‘Physical contaminants (% dry matter w/w)’ *add* ‘(see Note 6)’.

AMDT
No. 2
DEC
2018

Clause 5.2, Item (e)(iii)

- 1 Lines 4 and 5, *delete* ‘Material Safety Data Sheet (MSDS)’ and replace with ‘Safety Data Sheet (SDS)’.
 - 2 Line 5, *delete* ‘MSDS’ and replace with ‘SDS’.
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AMDT
No. 2
DEC
2018

Appendix A, Paragraph A4, Item (a)

Line 1, *delete* ‘windrow’ and replace with ‘composting mass’.

AMDT
No. 2
DEC
2018

Appendix A, Paragraph A5

Clause heading, *delete* ‘WINDROWS’ and replace with ‘COMPOSTING MASSES’.
