

**IWSFG Template for reviewer comments and
IWSFG secretariat observation**

Document reviewed: **PAS 1**

Due date:2018/03/02

1 Te=Technical, Ge=General, Ed=Editorial

Initial	Starting Line Number (e.g. 17)	Ending Line Number (e.g. 23)	Clause/ Subclause (e.g. 3.1)	Type of comment ¹	Comments	Proposed change	Observation of the secretariat
Lenzing	18	18	Foreward	Ge	The term "specification" is not clearly defined. In general a "specification" can also be a technical standard. However a technical standard can only be drafted by international organization for standardization.	Change "specification" to "guideline"	
Lenzing	25	25	Foreward	Ge	The term "specification" is not clearly defined. In general a "specification" can also be a technical standard. However a technical standard can only be drafted by international organization for standardization.	Change "specification" to "guideline"	
Lenzing	28	28	Foreward	Ge	The term "specification" is not clearly defined. In general a "specification" can also be a technical standard. However a technical standard can only be drafted by international organization for standardization.	Change "specification" to "guideline"	
Lenzing	77	77	1.Introduction	Ge	The term "specification" is not clearly defined. In general a "specification" can also be a technical standard. However a technical standard can only be drafted by international organization for standardization.	Change "specification" to "guideline"	
Lenzing	133	134	2. Purpose	Ge	The term "specification" is not clearly defined. In general a "specification" can also be a technical standard. However a technical standard can only be drafted by international organization for standardization.	Change "specification" to "guideline"	
Lenzing	142	142	3. Scope	Ge	The term "specification" is not clearly defined. In general a "specification" can also be a technical standard. However a technical standard can only be drafted by international organization for standardization.	Change "specification" to "guideline"	

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Lenzing	149	150	3. Scope	Ge	If the toilet paper is being treated in the ISO TC6 WG27, then it should be removed from the IWSFG guideline. Otherwise it makes confusion.	Remove the lines 149 - 150.	
Lenzing	183	184	6.2. Critical criteria to be met; Table	Te	<p>Tappi/ANSI Test method T 401 om-15 is designed to test paper and pulp and not for testing different kind of fibers. In this section there is also no references for the labs which would be able to test it and have sufficient statistical assessment for the validation of this test for other fibers types.</p> <p>Lenzing as a wood-based cellulose fiber producer uses the following test to identify different fibers in the textile and nonwovens fabrics more than 40 years:</p> <p>P.-A. Koch – microscopy of fibers materials Fr. Stratmann – to detect and identify the fibers Materials Microscopy in theory and practice, part 5 – Swiss textile apparel and fashion school.</p>	Replace the TAPPI/ANSI T 401 om-15 test by the following test: P.-A. Koch – microscopy of fibers materials Fr. Stratmann – to detect and identify the Fibers Materials Microscopy in theory and practice, part 5 – Swiss textile apparel and fashion school	
Lenzing	183	184	6.2. Critical criteria to be met; Table	Te	<p>Why IWSFG does recommend only the anaerobic biodisintegration FG506 and not aerobic biodisintegration FG505? Scientifically anaerobic biodisintegration is only for the break down of residual hydrocarbons from aerobic biodisintegration.</p>	Please comment and rethnik scope of biodisintegration for flushability.	

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Lenzing	205	206	7.1.2. Plastics	Te	Reference 7 does not match with the content of the lines 205-206.	Remove reference 7	
Lenzing	205	206	7.1.2. Plastics	Te	UNEP 2015 and 2016 describe the problems of plastics in the marine environment. Both references should be added to the section 7.1.2. Plastics.	Add references 11, 14 and 15 to 7.1.2. Plastics	
Lenzing	208	209	7.1.3. Regenerated Cellulose	Te	What are the strong concerns and negative impacts of regenerated cellulose on the environment?	Define it clearly and add quantitative and qualitative evidences to illustrate those concerns and impacts on the environment.	
Lenzing	208	209	7.1.3. Regenerated Cellulose	Te	There are not existing evidences for strong concern of regenerated cellulose and it's impact on the environment.	Change to: There are different opinions and acceptance regarding the existing international standards for biodegradability tests. The following references support the biodegradability of regenerated cellulose in the environment (references 16 & 18) <u>Reference 16:</u> Park, C. H.; Kang Y. K.; Im S. S.; „Biodegradability of cellulose fabrics“, J. Appl. Polym. Sci. 2004, Vol. 94, 248-253. <u>Reference 18:</u> Vincotte biodegradability certificates for Lenzing™ fibers	

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Lenzing	208	209	7.1.3. Regenerated Cellulose	Te	<p>Reference 11 is old version of the UNEP report (2015). The new report of UNEP published in 2016 identified the synthetic polymers made from fossil fuels as a source of microplastics and not viscose/rayon.</p> <p>Conclusion: Viscose/rayon is not identified as a source of microplastics in the UNEP report 2016 (Attachment 1; Executive Summary).</p> <p>UNEP report 2016 cites the literature Shen et. al. 2010 which shows Life Cycle Analysis studies on viscose, lyocell fibers and cotton (Attachment 1, chapter 8, the role of LCA assessment p. 126 and p. 250). This reference mentions higher impact of cotton (natural fibers) on the environment compared to those of viscose and lyocell fibers. This was on the basis of ecotoxicity, eutrophication, water use and land use of cotton.</p>	Replace reference 11 by the reference 15: UNEP (2016). Marine plastic debris and microplastics – Global lessons and research to inspire action and guide policy change. United Nations Environment Programme, Nairobi.	
Lenzing	208	209	7.1.3. Regenerated Cellulose	Te	References 11&12 are the same.	Remove reference 12. Add reference 11 to the plastics 7.1.2	
Lenzing	208	209	7.1.3. Regenerated Cellulose	Te	Reference 13 does not support the statement in lines 208-209. Several issues were identified with this reference. These are summarised in the Lenzing's note in the attachments.	Remove reference 13. Add additional references 16, 17 & 18.	

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Lenzing	209	209	7.1.3. Regenerated Cellulose	Te	Reference 14 describes the problems with plastics and not rayon.	Remove reference 14 and add it to the 7.1.2 Plastics.	
Lenzing	209	210	7.1.3. Regenerated Cellulose	Te	Which work is currently underway?	Disclose the study works and involve technical experts in the NW industries and Lenzing.	
Lenzing	228	231	7.3. Criterion Disintegration	Te	Why 25 mm sieve and 30 minutes?	Please explain and disclose technical data to support 25 mm sieve and 30 minutes test duration.	
Lenzing	243	245	7.5. Criterion Biodisintegration	Te	Why only FG506 and not FG505?	Please explain.	
Lenzing	247	247	7.5.2. Anaerobic biodisintegration	Te	1 minute rinse generates difficulties. Sludge cannot be easily removed from the solid part and it leads to incorrect test results.	Change to 2 minutes rinse.	
Lenzing	273	282	Bibliography	Te	References	Remove references 12 and 13 based on the arguments mentioned in point 7.1.3. lines 208-209.	
Lenzing	283	283	Bibliography	Te	References	Add reference 15: UNEP (2016). Marine plastic debris and microplastics – Global lessons and research to inspire action and guide policy change. United Nations Environment Programme, Nairobi.	
Lenzing	284	284	Bibliography	Te	References	Add reference 16: Park, C. H.; Kang Y. K.; Im S. S.; „Biodegradability of cellulose fabrics“, J. Appl. Polym. Sci. 2004, Vol. 94, 248-253.	

